

Novum Lumen Chirurgicum :

OR, A

NEW LIGHT

OF

CHIRURGERY.

Wherein is Discover'd a much more
Safe and Speedy way of Curing
WOUNDS than has heretofore bin
usually practis'd.

*Illustrated with several Experiments made in
Flanders in the Year 1694.*

By JOHN COLBATCH, a
Member of the College of Physicians.

The Third Edition.

L O N D O N,
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TO THE
KING'S
Most Excellent MAJESTY,

May it please your Majesty ;

THE great Experience I found of your Majesty's Bounty and Favors in the late Campaign in *Flanders*, and more especially that inexpressible one, intimated by Sir *Henry Bellasis*, I mean your Majesty's good Wishes, and Care of the meanest of your Subjects, when both his Life and Reputation were design'd to be snatch'd away by wicked and unreasonable Men, whom he never injur'd: These Considerations, *Royal SIR*, as they bind me perpetually to dedicate my Life to Your Service ; so they also give me Incouragement to presume, the same

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Fountain of Favor and Goodness will allow Your *Princely Patronage* to the ensuing Sheets, which I had leisure to write under Your *Majesty's Banner* the last Summer, when there was little Action in the Field.

I am sensible every new *Hypothesis* is at first exploded; and my Medicins being intirely new, as well as the Method of their Use and Application, I must meet with a Legion of Opponents; which makes me the more to stand in need of Your Royal Support; but yet I beg it no further in this case, than that they may have fair Play, and a clear Stage: Let them stand or fall as they deserve; since I am assured they will stand the most strict Examination, and severest Test.

I know that all Arts and Sciences in every Age find a beneficial Improvement by Ingenious Inquirers: and that the Art of *Chirurgery* (as it has bin hitherto practised) did never arrive to the *Zenith* of its Perfection, I have made bold, in the subsequent Discourse, to affirm.

In

In which Position I am the more confirm'd, when I reflect upon the Modern Discovery of the *Circulation* of the *Blood*, by the Learned Dr. *Harvey*; before whose time a Man would have bin accounted a distracted Person, that should have aver'd that all the Blood in a man's Body should pass thro his Heart fifty times in an hour. And much greater Discoveries and Improvements, since St. *Paul* went coasting to *Rome*, are found out in the Art of *Navigation*, by the assistance of the *Compass*: for now every Cabin-boy can demonstrate the verity of *Antipodes*; tho formerly a Learned Prelat, who first preached that Doctrin, was accounted an Impostor, and severely censur'd for the same.

I pretend not, SIR, to establish my new Doctrin by working of Miracles; but I hope I may with modesty enough be positive in my Assertion, That the Method of *Chirurgery* hitherto used is not the best: That all *Probes* and *Tents*, all *Digestive* and *Suppurating Medicins*, all *Cauterising* and strait *Ligatures* are injurious

to their Patients, and procrastinate their Cure. I am also certain that my Medicins will cure any Wounds, whether in the Flesh, or within the Cavity of the Body, where as dangerous Wounds were ever cur'd by any former Applications, and that with much greater speed and safety to the Patient, since they prevent Fevers and Mortifications.

If my Medicins prove any way beneficial to Mankind in general, I shall be abundantly satisfied and rewarded; having no higher Ambition than that I desire to be accounted, what I shall ever endeavor to approve my self,

ROYAL SIR,

The Most Obedient of Your

Majesty's Subjects and Servants,

JOHN COLBATCH.

TO THE
 READER.

FRIENDLY Reader, I have for about seven Years applied my self with all Heartiness and Vigor, to the making of such Experiments, whereby I might be capable, in some measure, to relieve the Necessities of those who labor'd under such Distempers, as, by the Methods and Medicins generally used, are, if at all, yet very difficultly to be cured: And I thank God, my Labors have not bin altogether ineffectual.

Amongst the Multitude of my Experiments, I thought it might not be lost labor to attempt something in order to be serviceable to those Worthy Persons, who out of a Principle of Bravery, and Love to their Country, do run themselves into the utmost hazard of their Lives; who, if they chance to be wounded, tho but slightly, are thereby often afflicted worse than by Death it self; nay frequently, after they have indur'd the greatest Torture and Misery, Death at last puts a Period to all.

Having at length lighted upon a pair of Medicins, the one Internal, and the other External, which I supposed would answer my Intentions; I began to make Experiments upon Dogs and other Animals, wounding them in the most desperate manner I could contrive: and in about a Hundred that I made, I had not above five that miscarried, three of which were before the Right Honorable the Lord Cutts; but two of those three, as I can plainly make appear, after the danger was over, were poison'd. I was likewise much abus'd in a Soldier of his Lordship's Regiment, who after my Medicins had set him free from all ill Symtoms, and he almost well, in my absence for four or five hours (having before for five Days and Nights bin constantly with him, for fear of Roguery) was made drunk, but by whom I know not, and in an hour or two after my return died.

My failing in these last Experiments, I suppose, was the reason I was not then imployed by his Majesty. However, being sufficiently satisfied of the worth of my Medicins, by my success in the Multitude of Experiments I had before made upon Dogs, and two or three upon human Bodies; I laid out a large Sum of Mony in preparing a good quantity of them; and with them, at my own charge, I went to Flanders. When I came there, His Majesty was most graciously pleased, by a public Order throout the Army,

Army, to give me an opportunity of making appear the Truth of my Pretensions; and, thanks to God, among the great number of Patients I had, there was but one miscarried; and how he died I cannot tell, being my self at that time ill almost unto Death, and so not capable of looking after him.

The Malice of some People against me is sufficiently known; but of this I am sure, that not one Patient I had in Flanders, but will contradict that printed Relation (in the Philosophical Transactions for February last) with Mr. Cooper's name to it; wherein he pretends to tell the World, That my External Medicin is the greatest Caustic imaginable. Now the Nature of all Caustics is to create great Pain, but of my Medicins the quite contrary; for instead of that they are the greatest Anodyns, or easers of Pain that I ever met with. One very signal Instance wherof you will see in my Experiment made before Sir William Ruffel, &c.

My Medicins where they are timely enough, and regularly used, cure all sorts of Wounds, without bringing them to Suppuration; but where that is once begun, they will soon cause a discharge of the digested Matter, and bring the Wound to a state of healing: Nay, where Wounds have bin brought to Suppuration, and in a very ill condition, which, by the common Methods,

thods, would have taken many weeks before they were, if at all, to be cur'd; by my Medicins, as in the case of the Soldier of Sir James Lesley's Regiment, and that of Colonel Coy's, hereafter related, &c. it has bin perform'd in a small time.

In some Gun-shot Wounds, where the Bones are extremely shatter'd, by the common Methods, the bringing away of broken Splinters is extremely hazardous and troublesom, but by my Methods not so; tho such Wounds require a much longer time before they are well than others: but who in such Cases will not have a little patience, when he is free from Pain, and under no confinement? All the Patients I have had under these circumstances, have bin fatigu'd with long Marches, exposed to Wind and ill Weather, and indured all other sorts of Hardships, which may have occasioned their being longer in Cure than otherwise they might have bin.

The number of Experiments I have related, tho I might have added many more in the ensuing Tract, is not great; but those that are, I suppose may be sufficient to demonstrate the Truth of my Pretensions; which are, That all curable Wounds may be cured with much more ease and speed than by the common Methods; and that a great number of those Wounds usually accounted mortal, are not so: And likewise, that the stopping of great Fluxes of Blood, the nonperformance of
which

To the Reader.

II

which costs many People their Lives, is to be performed with the greatest ease imaginable.

I have bin sufficiently deter'd from prosecuting my just Designs for the good of Mankind; having first of all, besides many other great Affronts, bin publicly threatned to be murdered; afterwards my self with two of my Friends were secretly poison'd, one of whom in a short time died in a most miserable condition, and we two who survive narrowly escap'd with our Lives. However, the utmost malice of these pernicious People shall never hinder me from going on in my honest Undertakings.

Tho I have met with this ill treatment from some mean, ill principled People; yet I must own that the English Army affords a great many Chirurgeons, who are Men of extraordinary Worth and Candor, from some of whom I have received very civil treatment.

I have purposely omitted the using of any, or at least very few terms of Art, but have made every thing as plain as I can; my design not being to gratify and please Critics, but to satisfy Gentlemen of the Truth of matter of Fact.

As for my not mentioning what my Medicins are, with the manner of preparing them, I hope for the present that will be excused, because every one knows where to be furnished with them ready to their hands.

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But some may say it looks too like a Quack to give large Encomiums of those Medicins which I have not made public to the World. To which I answer, that some mens Censures I value not, having so many great Precedents before me, who gave large and deserv'd Encomiums of those Medicins they made not public during their Lives, some of them not at all; and yet their Medicins were of general use and reputation, as Helmont's Mercurius Diaphoreticus, Willis's Preparation of Steel, and Tincture of Sulphur, Needham's Panacea, &c.

I have not at this time, neither have I had for these two years last past, the least interest or concern in the Medicins here recommended; yet at the same time I am not asham'd to let this Piece come abroad a third time. The Experiments are every one of them true to a tittle as they are related; and for the Hypothesis, I shall not desert it, till some body substitutes a better in its room.

From my House in Villers-
street, York Buildings.



Novum Lumen
CHIRURGICUM.

HAVING for a long time bin much dissatisfy'd with the common Methods of Chirurgeons in the Cure of Recent Wounds; and almost every day observing the Inconveniences that attended those People who had occasion to make use of them; for my own satisfaction, and the good of Mankind, I took into consideration, whether their Methods were agreeable to Reason, and the Subject upon which they wrought. At last I was fully satisfy'd, that their Practice was most unreasonable; which I shall endeavor to evince with as much brevity and accuracy, as the Unsetledness of my present Condition will admit: which when I have don, I shall lay down my own *Hypothesis*, and doubt not to confirm it both by Reason and matter of fact, which is the most clear sort of demonstration. For the right performance of which task, I must first give a short account of *Nutrition*, without which my present Undertaking will be altogether maimed and imperfect.

To give an account of the Nutrition of Human Bodies, or of other Animals, in so clear a manner

manner as ought to be don, I should first begin with the Formation of the *Fetus*, and its original constituent parts, with the manner of its Nutrition and Increase before all the parts are perfect, and how after, till the time of Birth; the performance of which task only is sufficient for a Volume: Therefore I shall content my self with observing only, how what we eat and drink is prepar'd in the Stomach and other Digestions, and so fitted to supply the defects of all the parts of our Bodies; which, tho the most hard, continually suffer both a decrease and increase; nay, even in the terms of Chirurgeons upon another occasion, loss of Substance, and supply of that loss.

The solid Food we eat being well chew'd in the Mouth, is there mixed with a Juice contained in the *Glands*, which are in great numbers dispersed all over the Mouth and parts adjacent; which Juice, being what we call *Spittle*, is highly impregnated with a penetrating *saline Spirit*: a demonstration of the Truth of which is evident in a known and very common Experiment, which is as follows. Let a small quantity of *Mercury* be put into a Mortar, spit upon it, and grind it very well with a Pestle, and the Mercury will presently be (according to the vulgar expression) kill'd. The like to which nothing we know of will do, but those things which manifestly are of a saline nature, and that of the Tribe of *Acids* too; for all Alkalious Salts have a quite different effect. The

The Meat, as above, being well chew'd, and afterwards convey'd into the Stomach, and there diluted with a proper Vehicle, as Wine, Ale, &c. (the more generous the better) is, by the means of the foresaid *spirituous*, saline Liquor, (the heat of the Stomach likewise assisting) divided into such minute Particles, as constitute that viscid Liquor we call *Chyle*; which Chyle is discharged out of the Stomach so fast as it is made, by means of the Liver, which constantly presses upon it thro the *Pylorus* into the *Intestinum duodenum*, where, and in the *Jejunum*, it is further attenuated by the intervention of the *Pancreatic* Juice and the Gall, which by the fulness of the Stomach are squeez'd out of those Vessels that contain them into the aforesaid Guts; from whence the finer parts of this attenuated Liquor are receiv'd into a certain kind of Vessels we call *Lacteal* or milky Veins, which are in vast numbers inserted into the aforesaid Guts: the grosser part, by the *Peristaltic* motion of the Guts, is carried downwards to be cast away as Excrement.

Now what is received into the *Lacteal* Vessels, is carried on to the common receptacle of the Chyle in the *Mesentery*; from whence by a very large Vessel, called the *Thoracic Duct*, into the *Subclavian* Vein; thence, together with the returning Blood and *Lympha*, into the *Vena Cava*, and so to the right Ventricle of the Heart; whence, by the *Systole* or Contraction

traction of the Heart, thro the Arterial Vein, into the Lungs; where, by the Contraction and Dilatation of the Lungs, it is mix'd with the Blood, and that part of it which is fit for that purpose, is there made Blood: The rest only remains confusedly mixed with it, and is used for the Nutrition of the parts, being what we call *Serum*. The Blood, as I apprehend, is not at all made use of for the Nutrition of the parts, but is that red Substance, wherein is contain'd the *Biogenicium*, or Lamp of Life, to which it is a sort of *Pabulum*.

I confess some say that *Heat* and *Fire* proceed from nothing else but the parts of Matter being put into violent motion; and others, that there can be no such thing as a Flame in our Blood, because a sufficient quantity of Air cannot pass thro the Coats of our Veins and Arteries, or any other way enter into the Blood to keep that Flame burning: so that the Heat we feel in our Bodies, proceeds from nothing else but the violent motion of the Blood thro the Veins and Arteries.

To which I answer, that having several times tried, by the most violent Agitation of many fluid Bodies in inclosed Vessels, I could never perceive the least warmth; nay I have kept Blood as it came warm out of the Veins in continued violent motion, and instead of hindering, it has facilitated its cooling.

But for that Fire, which I judg to be in the Blood, I suppose it quite different from common

mon *culinary* Fire, and burns by quite different means, and has a different *Pabulum*. For it is well known, that Blood by Distillation yields but a very little of any such substance as will afford supply to common Fire; and yet from Blood, and that Excrement of it we call Urin, by a peculiar management, may be obtain'd that substance we call the *Phosphorus*, which is as much Fire as any thing we know, it being so inflammable, that unless it be immerg'd in Water, it presently consumes all away in Flame. There is an old Maxim, that *Nil dat quod in se non habet*; which is very pertinent to the point in hand: and from whence I infer, that if there were not Fire in the Blood actually before, I cannot understand how this most fiery Substance can be obtained from it.

But there still lies a mighty Objection in my way, which I shall endeavor to clear before I go on. It is this: Suppose the heat of the Body proceeds from this fiery substance in the Blood; how coms it to pass, that in many cases, as in Wounds, when matter is generating, &c. the motion of the Blood and heat of the Body is greater than at other times, when that matter, which enters into the Blood, and causes this hurry and disorder, has no tendency to increase the Flame?

To which I answer, that tho such Particles entring into the Blood, may increase the heat and motion of it; yet it is not out of any na-

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tural tendency they have *per se* so to do; but accidentally they may do it, by causing an intestinal motion or fermentation, whereby the *Cement* of the Blood being loosned, and its Texture much spoiled, this Flame is at liberty to burn more furiously. An instance of which may be seen in common Fire: for if the combustible matter of which it is to be made, be laid close together, it will scarce burn at all; but being laid at a little distance, it presently burns briskly. And if it were not something more than mere motion a little excited, which is the cause of Fevers, I cannot understand how a very fat Person in a violent Fever should in a few days be reduced to almost nothing but Skin and Bones, when the visible Evacuations of *Urin* and *Stool* are generally less than at other times; which frequently happens. Now it is well known, that no Liquors will ferment, but those which manifestly abound with fiery Particles, as all sorts of vinous Liquors; and the stronger all such Liquors are, the more readily they ferment.

The confused mixture of *Blood* and *Serum* (I stick not to call it a confused one, because with good Glasses the Blood may be seen floating in the *Serum* in the form of small *Globules*) is carried back from the Lungs by the *venal Artery* into the left Ventricle of the Heart, and from thence protruded by means of the *great Artery*, which is immediatly divided into a great many branches, to all parts of the

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Body,

Body, even the most minute; the Bones themselves not being destitute of Arteries to bring this mixture to them for their Nutrition, and Veins to carry back what is superfluous.

The manner of Nutrition I conjecture to be as follows. The Arteries, which, as before observ'd, at their Origin are very large, are at last divided into an almost innumerable company of small Branches, even so small, that the best Glasses will scarce discover them to us. At the extremities of these small Arteries is that compound Liquor we call *Blood*, discharged upon or into the *Muscular Fibers*; and not only the soft parts, but even the Bones themselves are observed to be fibrous; which Fibers, tho never so small, are yet hollow. Now there are vast quantities of the small Particles, which compose not only the fluid, but also the most solid Parts, continually discharg'd by insensible Transpiration. And *Sanctorius*, that famous *Roman* Physician, in his nice Experiments observes, that we waste more every day by insensible Transpiration thro the *Pores*, than by the visible, sensible Evacuations of *Urin* and *Stool*. The waste made by insensible Transpiration, is repair'd by the *homogeneous* part of that Liquor, contain'd in the Arteries, commonly called *Serum*; which Serum is adapted or made fit by the Pores of the parts it is brought to, to be applied to such places where there is any

waste. But how the parts of matter are modified and adapted so as to constitute a Body, I think would be arrogance in me to pretend to define ; but that Bodies of very different natures may, and do receive nutrition and increase from one and the same substance, which in it self seems to be simple and *homogene*, the following Experiments (the one a common one, and known to every body, the other two made by two of the greatest Men these last Ages have afforded, *viz. Helmont* and *Boyl*) will I suppose clearly demonstrate.

Let a *Crabtree stock*, which has six branches, have into each branch a Graft set, each Graft of a different nature ; as for instance, let three of the grafts be of *Pears*, each of a different sort, and the other three of *Apples*, som sweet, som sour ; and the Juice brought up into the Stock (which, had the top bin left on, would only have produc'd Crabs) being brought now into the Grafts, is by their Pores so alter'd, that it affords not only nutrition and increase to the Grafts, but inables them to bring forth Fruit, each according to its kind : which sight I have seen with great delight.

The second Experiment was made by that great Inquirer into Nature's Secrets, *Helmont*, as follows. He took two hundred Pound of *Earth* dried in an Oven, and having put it into an Earthen Vessel, and moisten'd it with

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Water,

Water, he planted in it the branch of a *Willow-tree* of five pound weight ; this he watered as need required with Rain, or with distilled Water : and to keep the neighboring Earth from getting into the Vessel, he used a Plate of Iron tinn'd over, and perforated with many Holes. Five Years being effluxed, he took out the Tree and weigh'd it, which, computing the Leaves that fell four *Autumns*, he found to weigh one hundred sixty nine Pounds, and about three Ounces : And having again dried the Earth it grew in, he found it wanted of its former Weight of two hundred Pound, only about two Ounces ; so that one hundred sixty four Pound of the Roots, Wood, and Bark, which constituted the Tree, seem to have sprung from the Water only.

The third Experiment, being Mr. *Boyl's*, was this. He ordered his Gardiner to dig up a convenient quantity of good Earth, and dry it well in an Oven, to weigh it, and then to put it into an Earthen Pot, almost level with the surface of the Ground, and to set on it a select Seed of *Squash*, which is a kind of *Indian Pompon*, that grows apace ; this Seed he order'd him to water only with Rain or Spring-water. The Plant flourish'd and grew apace ; and tho sown too late in the Year by two months, yet being gather'd at the proper Season, the *Pompon*, *Stalks*, and *Leaves*, weigh'd three Pound wanting a Quarter ;

then he took the Earth, and dried it nicely, and found it weigh exactly as much as before.

As a confirmation of the Truth of the two last Experiments, every body knows, that *Mint*, and such like Plants, being set in a Bottle of Water, flourish as much, or more than those planted in the Earth. Now these Vegetables, tho they receive their nutrition and increase from so simple and *homogene* a substance as Water; yet by a Chymical *Analysis*, there may be obtained from them such substances, as are not easily to be mixed with Water, and seem to be of a quite different nature from it: nay, the very same substances, for the most part, may be obtain'd from Vegetables as from Animals, if they are rightly managed. For the volatil urinous Spirits are generally own'd to be the product of animal substances only; yet I well know, that from almost all sorts of Vegetables, without any addition, only suffering them to putrefy, may be obtained a Spirit and volatil Salt, no way differing from that of *Hartshorn*, and human Blood. From all which I gather, that if the great variety of Vegetables, which are of such different natures, have their nutrition and increase from so simple a Body only as Water; I know no reason to doubt that all the parts of a Human Body, or other Animals, may have their nutrition and increase from the Serum of the Blood, which is analogous to Water. When

When there is, by any accident, a Division made in the fibrous parts of the Body, which is what we call a Wound, (and by the way I think there is no difference, only *secundum majus & minus*, between those walters made by *Transpiration* which are natural, and a Wound made by *Force* which is preternatural) Nature her self would in a small time make a Union, if she was not hinder'd, but assisted. Now I shall endeavor to make appear, that by the common Methods and Medicins of Chirurgeons she is hinder'd, but assisted by mine; which is all not only in this case, but in all others where Nature is oppressed, that is requir'd of Physicians or Chirurgeons; who are, or at least ought to be Ministers of Nature, and not her Oppressors.

Now to shew wherein lies the unreasonableness of the common Methods of Chirurgeons in the Cure of Wounds, and wherein they hinder and oppress Nature in her most regular Operations: Suppose a Wound be made, and it's no matter where it is; for what will cure a Wound in one place, will do it in another, the matter brought for the nutrition and supply of all the parts being the same. The two Experiments before mention'd are sufficient to confirm, that what will afford nutrition and increase to a muscular fleshy part, may do the same to a Bone; for the *Pompion* is a soft Substance like muscular Flesh, and the *Willow* a hard brittle substance, analogous to that of

Bones; and yet both had their nutrition and increase from Water only.

Now let a Wound be made where it will, and how it's made matters not, whether it be by Cutting or Contusion; only there is this difference between those Wounds called *incised*, and those called *contused* ones, (tho by the way, I think I may safely affirm, there is no Wound made by incision but may as properly be called a contused one, let the Instrument be never so keen with which it is made, as a Wound made with a Bullet; but not in altogether so eminent a manner, the difference being only *secundum majus & minus*) that there is a larger space between the Lips of the one, than of the other; and consequently Nature is at more charge and trouble, and requires longer time for making a Union of the one than of the other. For tho in both there requires the generation of fresh substance; yet in Gun-shot Wounds there is a greater quantity to be generated than in incised ones, the Lips of the Wound being further asunder; and so of consequence the more work there is to be don, the longer time Nature requires for the doing it.

Let a Division be made in any of the parts of the Body, which, as before observed, is what we call a *Wound* (how it is made matters not, and whether it be by cutting or contusion) the nutritious Juice is immediatly brought to the extremities of the wounded Vessels

Vessels all over the Wound. Now I stick not to call the smallest Fiber, or Fibril, a Vessel; for if they were destitute of Cavities, they could never be nourish'd, much less admit of increase. Now all the Medicins us'd in the common Methods of Chirurgery, are of such a nature, as to relax the divided Fibers so much, that they cannot contain the nutritious matter brought to them, but let it pass into the Wound, where it is by the same Medicins corrupted, and turn'd into that substance we commonly call Matter. Now the Corruption of the nutritious Juice cannot be perform'd without a sort of *Fermentation*; and it is the fermenting Particles, that fretting the Fibers, cause inflammations in Wounds; and by entering into the Blood, and dividing its Texture, cause *Symtomatic* Fevers, which frequently prove so fatal. To confirm the truth of which, I appeal to the experience of all Mankind, who have ever bin wounded (and there is scarce one among a thousand but has received some sort of Wound or other) whether they have not felt pain, and had something of a Fever, more or less, according to the largeness of the Wound, during the time that matter was generating. Now it is evident, that whatever will cause such sort of pain, and create a Fever, must be of a *heterogeneous* nature, and an Enemy to that Body (for I verily believe, that only the Medicins applied are the occasion of all those
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ill Symtoms that frequently attend Wounds) to which it is applied, or into which it is receiv'd. Of the truth of which, even the nature of a Fever is a sufficient confirmation: for a *Fever*, in the terms of many great Men, is nothing else but a *Nixus Natura*, or contention of Nature to throw off its Enemy. Others call a Fever *Sanguipurgus*, or a Purifier of the Blood, which is the same with the former, only in different words. And a late learned Author, the worthy Dr. Cole, in his Treatise of *Intermitting Fevers*, the only rational Piece in my opinion that ever was writ on that Subject, plainly makes it appear, that the seat of Agues is in the *Cortex* of the Brain, from whence, at certain periods of time, the matter is thrown off, by the mediation of the Nerves, to all the parts of the Body, which causes that Coldness, Rigor, and Horror perceiv'd at the beginning of a Fit; this matter being afterwards receiv'd into the Blood by the Capillary Veins, which are every where dispers'd, and being of a heterogeneous nature to the Blood, puts it into a violent motion and agitation, in order to throw it off: which irregular motion never ceases, till all the matter causing it is thrown out by the external cuticular Pores. I could use many more Arguments, to prove, that not only *Symtomatic Fevers*, but even all sorts of continued ones, do proceed from heterogeneous Particles being admitted into the Blood, which for brevity's sake I shall omit.

Now,

Now, after they have with so much hazard and trouble generated matter (tho many times instead of generating matter, their suppurating Medicins cause Mortifications in the parts, especially if there be an ill habit of Body before-hand; the bad consequences of which every body knows, but especially to their sorrow those who have experienced it themselves) they use *mundifying* Medicins; and when Nature is almost tir'd and oppress'd, weak as she is, they leave her to do her own work: and for my part, I don't at all see or understand, that she is in the least assisted by the Medicins they afterwards use.

But what I have bin hitherto saying concerning their Medicins and Practice, relates only to external *Flesh-wounds*; and if such hazard attends the cure of these Wounds, what is to be expected in those within the Cavity of the Body, where the Lungs, Liver, Guts, &c. chance to be wounded? In such cases their Medicins are by themselves own'd to be insufficient. And if at any time it happens, that any of the forementioned parts are wounded, and the Party recovers, themselves account it almost miraculous, because such Wounds, by the general vogue of the greatest Chirurgeons, are accounted mortal, and not without reason: For to bring a Wound in the Lungs, Liver, Guts, &c. to suppuration, is to bring certain Death; and to cure a wound without bringing it to suppuration, they don't
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pretend: So that if any of the forementioned Wounds are cur'd by them, it is to be attributed to some strange and secret Operation of Nature unknown to every body, and not to their Skill: for he only is accounted skilful in the cure of any Malady, the most of whose Patients recover; but such as have not one in ten of their Patients that don't miscarry, are not to be accounted so: And I verily believe, that not one in ten of those wounded in the Cavity of the Body, and managed after the common Methods of Chirurgeons, have recover'd. So I leave it to every man's Judgment, which Method is most to be confided in, either that where scarce one in ten miscarries, as in mine; or the other, where not one in ten recovers, as in the common Methods of the Chirurgeons.

Besides the Inconveniences and Insufficiencies of their Methods and Medicins already mentioned, there is still another as great, *viz.* when any large *Blood-Vessel* is wounded, how to stop the *Flux* of Blood; which is not to be perform'd without either actual or potential *Canteries*, the inconveniences of which almost every body knows: nay, Cauteries themselves are not to be trusted without very strict bandage, which always, or for the most part, causes Mortifications; the necessary consequences of which is loss of Limbs or Life, many times both, as I have seen with great regret.

In all Wounds, tho but flesh ones, of any consequence, they confine their Patients to the lowest Diet imaginable, forbidding them to eat Flesh, or drink Wine; and tho there has bin great loss of Blood before at the Wound, yet they seldom or never fail, to the great weakning of their Patients, to let Blood in great quantities, which they often repeat, to prevent the increase, and for taking off the Fever, which always more or less attends them, and in spite of all they can do, frequently proves of fatal consequence.

I have not mention'd their *Tenting*, *Probing*, and other nonsensical trumpery, which is still used by most Chirurgeons, to the great detriment of their Patients, because many judicious Chirurgeons in all places begin to leave them off; who, I question not, will be glad to change their old insuccessful way of Practice altogether, when once inform'd of a better and more certain Method.

To give an account of the Methods I use in the cure of Wounds, will not take up much room, they being short and easy, and not round about, as the common Methods are. However, that I may do it somewhat clearly, I shall begin with *incised* Wounds, so called; and next proceed to give an account of *contused* ones, made with shot or the like: First, where only the *muscular* fleshy parts are wounded; and secondly, where the *Bones* are broken and shatter'd to pieces, and the
Tendons

Tendons torn: which last sort of Wounds have not touched upon in my account of the unreasonableness of the Methods commonly used in the cure of Wounds; for if there be such hazard and trouble in the cure of incised Wounds, all will allow, that it must be so in a much more eminent degree in such Wounds as these. Suppose a Wound be made with a Sword, or other cutting Instrument, the length or depth of which signifies nothing; I make a Solution of my *Powder* in Water, for want of which in Urin: and as soon as conveniently I can, the sooner the better, I either squeeze or with a *Syringe*, if the Wound be deep, inject into the Wound some of the said Solution. I then close the Lips of the Wound together, which if wide and large, I stitch up. When I have so don, I apply a *Pledget* of fine *Tow* wet in the said Solution, to the Wound, not letting it go into it, but only to cover the edges of it, and lie all over it. And if there be chances to be any large *Artery* cut, I hold on the *Pledget* close with my Hand till the Flux of Blood ceases, which will be in a small time otherwise not; afterwards I bind it on with a very easy Ligature, then I give my *Tincture* in Wine, and repeat it according to the Directions at the latter end of the Book.

Now to prove my Medicines agreeable to the Nature of Human Bodies, and of that Juice by which I conjecture (for to be sure I cannot) the Body is nourish'd, and more efficacious

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than the Medicins used by Chirurgeons, the following Arguments will, I suppose, evince; they not being the effects of Fancy, but of most certain and reiterated Experiments.

First of all, my Medicins never cause any Pain, unless it be just when the external one is squeez'd or injected into the Wound, and that pain is very little more than what would be caused by using Spring-water in the same manner.

Secondly, There is no Pain afterwards, but the parts are pliant and easy, as if not hurt at all.

Thirdly, if there has bin great Pain before, according as it has bin greater or less, so it has bin longer or shorter before taken off, but the greatest in a short time. As when a Wound had bin long receiv'd, and had other Applications to it before mine, had bin much inflam'd, and the parts adjacent much swell'd, and consequently the Party in great pain; all these Symtoms have bin totally taken off in 24, or 48 hours at furthest; and many times in such Cases, the greatest Pain taken off in a few minutes. But they have never bin the cause of pain, swelling, or inflammation; which by the way is a certain argument they are no *Cautics*, as som maliciously and falsly report.

Fourthly, There has never any such thing as a Fever, let the Wound be internal or external, attended any who have used my Medicins

cins soon after they have bin wounded ; but several who have bin ill manag'd before, and thrown into violent Fevers, have in 24 hours, by the use of my Medicins, bin totally freed from them, and that without Blood-letting, or abstaining from Flesh or Wine ; the more of which they drink, so they keep within bounds, I always find them the better.

Fifthly, In all incised Wounds, where my Medicins have bin soon enough used, and no other Application preceded, they are perfectly cur'd in a few days, without suppuration ; and I have frequently observ'd that at about four days end, such Wounds have bin filled with a Substance much like *Hartshorn-gelly*, which I have conjectur'd to be young Flesh ; and in two or three days I have found my conjectures true, the said Substance being converted into good Flesh. But where Wounds have bin long receiv'd, and matter generated, they have bin cured in a small time, without repeating the Application above once in three or four days. I have had to do with Wounds long receiv'd, which have bin both deep and large, and by the common Methods must have discharg'd a great quantity of matter ; but the quantity of matter com away after using my Medicins has bin so small, that I have good reason to conjecture, it was no more than what was form'd before they were applied.

As for Gunshot Wounds in any of the fleshy parts,

parts, they are cur'd in the same manner with the former, and without the least ill Symtom; only with this difference, that whereas in incised Wounds, if my Medicins are applied as soon as, or presently after, the Wound is receiv'd, there is little or nothing comes away from them; but in Gunshot Wounds, the *Glands* and *Lymphatic* Vessels being broke and torn to pieces, there is for some time a considerable quantity of the watry matter contain'd in those Vessels discharged out of the Wound; and the loss of substance being great, they require a longer time to cure.

But some may object, How is it possible, without bringing the Wound to Suppuration, to cause a discharge of extraneous Bodies, as pieces of Clothes, Splinters of Bones, &c. which for the most part are lodg'd in Gunshot Wounds?

To which I answer, That the said watry Liquor being continually discharged out of such Wounds, and the parts adjacent not being swel'd, as they never are so as to close up the Orifice of the Wounds; by means of the said Liquor they are brought away without any hazard or trouble, and for the most part without any pain at all, especially if of a passable bigness; if not, the Orifice must be dilated to make way for them. And as for that *Slough* of which some make so great a noise, it is also by means of the Liquor brought away without any digestion, it being nothing
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but a complication of torn and broken Fibers lodg'd about the sides of the Wound. As for broken Bones, they being put into their right posture, the nutritious Juice brought to them fills up the void spaces, and by the Texture of its parts in a little time grows as hard as any other part of the Bone. What has bin said of Bones and Flesh, may be said of Tendons (the wounding of which was heretofore accounted as fatal as any thing; and being of a *mucilaginous* nature, digestive Medicins were wont to rot and destroy them, and so cause Mortifications) so that their ends, if totally divided, can be brought any thing near together; which if it be not possible to be don, as for the most part it is, there is no other ill consequence, but losing the use of that part to which it belongs.

From what has bin said, I think I may rationally infer, that my Medicins are agreeable to Nature, and assist her in her regular Operations: And on the contrary, that the common Medicins are disagreeable to Nature, and hinder her in her Operations.

As for instance: Two Officers of the Regiment of *Fusileers*, that were wounded, were in the same Tent together: the one of good Habit of Body, had receiv'd a slight Wound in the Arm; his Wound had bin receiv'd three weeks, and was manag'd according to the common Methods; his Arm was much swel'd, greatly inflam'd, and he in great pain, and
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not like to be well in a long time. The other of a very ill habit of Body, had a Sword run thro the most fleshy part of his Thigh, the Orifices on each side 3 Inches long; and yet being managed according to my Methods, in a little above a week was perfectly well, having felt no pain from the beginning.

Their Medicins corrupt the nutritious Juice, and turn it into Matter. My Medicins being friendly to the nutritious Juice, prevent it from degenerating or corrupting; by which it is capable of performing the work design'd it by Nature, which is to fill up all Vacuities, either naturally or forcibly made, and is performed in the manner following. The nutritious Juice being by the Arteries brought to the Parts, the Particles of it are by the Pores of the Parts so modified, as to form a Body like that thro whose Pores it pass; from whence it is easy to imagin, how very large spaces forcibly made may be again fill'd up with fresh Substance, like what was there before.

Their Medicins cause inflammations and swellings, and consequently pain in and about Wounds: Mine not so.

Their Medicins either *per se*, or by accident, seldom or never fail to cause Symtomatic Fevers: Mine not so; but on the contrary either prevent, or take them off when fixed, without starving and destroying Nature for want of necessary Aliment.

By their Methods and Medicins they can't stop Fluxes of Blood without most dismal Consequences. My Medicins stop Fluxes of Blood with ease and safety, and at the same time cure the Wounds.

To confirm what I have said, I refer to the following Experiments, of the Truth of which 'tis no difficult matter to be inform'd.

To conclude all ; I would not have any to understand me, as if I positively asserted, I can cure all sorts of Wounds, and that no one shall miscarry under my Hands : for whoever dos so is greatly mistaken ; and I must own there may be a few unlucky Wounds within the Cavity of the Body that may elude the efficacy of my Medicins ; yet that most of 'em may be cur'd with all the ease imaginable. But for External Wounds, let them be what they will, I think there are few or none, if people will be regular, but may be cur'd without hazard or inconvenience.

Experiment I.

John Mahullon, an Irish man, in the Regiment of Col. *Brewer*, in the Company of Capt. *Puryfye*, was in a Rencounter run thro the left Arm, and into the left Breast between the second and third Rib, on which he presently fell down as dead. He says, he found the Sword pass into the inmost part of his Breast.

Breast. Immediatly he had a great difficulty in breathing, and a weight upon his *Diaphragme*, likewise a great quantity of *spumous* Blood and Air gush'd out at the Wound in his Breast; which Symtoms, I suppose, are a clear demonstration that his Lungs were wounded. Mr. *Chomly*, Chirurgion to the Regiment, immediatly applied my external Medicin, which stoppt the Flux of Blood at both parts, which at the Wound in his Arm was also very great. But he did not give the internal one, as he ought to have don that Night; so his shortness of Breath, and weight upon his *Diaphragme* continued: but the next Morning giving it him, he was immediatly freed from those Symtoms, and that day march'd on foot six miles with the Army, and was not in the least out of order, or had any thing of pain after; neither did he at all confine himself to his Tent.

Experiment II.

ONE *Paterfon* a Scots-man, in the Regiment of the Right Honorable the Lord *George Hamilton* (now Earl of *Orkney*) was about 8 a clock one Evening run into the Belly about two Inches above the Navel on the right Side; the Sword, as himself and other Spectators say, enter'd at least 7 or 8 Inches, and being a very broad one, could not fail of doing

much mischief. I may conjecture, for to be positive no man can, that the Sword past thro the Liver; and the Symtoms attending him do, I believe, plainly demonstrate that the *Intestins* were also wounded. By his Lordship's Command I was sent for to take care of him; but not being at home, Mr. *Chomly* went to him, and in his Lordship's presence applied the external Medicin, and gave him the internal one in a large Draught of Wine as usual. After he had taken care of him, he immediatly applied himself to find me, to give me an account of our Patient's condition; but his Account was so scurvy a one, that I was sorry he had meddled with him, which had I bin there, I should not have don, by reason my whole Reputation lay at stake; for it was but two days before that his Majesty was graciously pleased by public Orders throout the Camp, that notice should be given to my most worthy Friend Sir *Henry Bellasis*, of the first Man wounded, that he might see whether I were capable of performing what I pretended to. Now the Symtoms that attended this Man were violent Vomitings, and an intolerable Soreness and Pain about his Belly and in his Bowels; and for that Night he had no rest at all. In the morning when the General saw him, his circumstances were little or nothing better; but towards the Evening he began to rest, and before next Morning his ill Symtoms totally vanished. For two days he had no stool; and

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when he had one, it was scarce any thing but coagulated Blood. On the fourth day he was able to go with me to Court, where the General and other Officers saw him very well. Besides the foresaid Wound, he was also wounded in two other places, and much bruised, of all which he perfectly recover'd.

Experiment III.

MR. Lane, a Voluntier in the Regiment of Sir *Bevil Greenvil*, was in a Rencontre run into the left Pap: the Sword, by all accounts, enter'd a great way into the Cavity of the Breast. The Chirurgeon of the Regiment was by Sir *Bevil's* Order sent to take care of him, who presently returned and told Sir *Bevil* that he was a dead Man, and all the World could not save him; for that he no sooner thrust his Probe into the Wound, but it was beat back by the Pulsation of his Heart: he likewise told the same to Mr. *Willy* Chirurgeon to Col. *Selwin's* Regiment, and to several others; but withal, in a ridiculing manner, said, they might send for their famous Doctor, meaning me, and if he could cure him, he would fight Duels every day. I was sent for, but being ill could not go; so I sent Mr. *Chomly*, who notwithstanding his ill Circumstances, being animated by what he had before seen, was not afraid to take him into his care;

tho the Symtoms that attended him were as bad as could be, and he alive. He had strong Convulsions, shortness of Breath, a great Load upon his *Diaphragme*, and a large quantity of *spumous* Blood gush'd out at the Orifice of his Wound, together with such a Blast of Air, that it was almost equal to an ordinary Pair of Bellows. He applied the external Medicin, and gave him the internal one, which immediately reliev'd him; but for 48 hours my Friend Mr. *Hamstead* was forc'd to keep a Guard upon him, for fear the Chirurgeons should do him a mischief, who before attempted to play me som slippery Tricks. At the end of which time Mr. *Lane* sent me word, he could lie on the vvounded Part vvithout the least pain; and that my Friend need not give himself any more trouble, he being as vvell as ever in his Life, only vvweak vvith the great loss of Blood: Accordingly my Friend left him. But the next Evening there came betveen twenty and thirty Chirurgeons, vvho by violence (I suppose having before made him drunk) pull'd off the Dressings from his Wound, vvith no other design, as I can imagin, than to murder him, having applied nothing in its room, but left the Wound bare; in vvch posture it continued all Night. My People going next Morning to visit him, he told 'em the Story; and vvithal said that every thing vvvas vvell, his Wound being so far heal'd before, that their pulling off the Dressings did him no harm:

harm : howvever, they made another Application, which, to the best of my remembrance, was the second and last that was made. But from the beginning he took the Tincture once in five or six hours in a large Draught of Wine. I have since seen him on the long march, walking on foot, when he told me he was as well as ever in his Life. This Man had as ill a habit of Body, as it was possible to have.

Experiment IV.

MR. *Fletcher*, a Lieutenant in Col. *Fitz-Patrick's* Regiment of Fusileers, was in a Rencounter run thro the most fleshy part of his right Thigh ; after the Sword was in up to the Hilt, he and his Antagonist clos'd, and fell upon the Ground, where they continued strugling a considerable time, the Sword being still in Mr. *Fletcher's* Thigh : but Company coming in, they parted 'em, and pull'd out the Sword, and sent for Mr. *Chomly* to take care of him, who when he came, found the Orifices on each side at least three Inches long, and very wide ; from which proceded a very great Flux of Blood. He first squeez'd som of the Solution of my Pouder into the Wound, then stitch'd it up, and applied som Pledgets of Tow, wet in the Solution, to both Orifices ; afterwards he gave him the Tincture in a glass of Wine, which was repeated once in

5 or 6 hours, for three days. In one week's time he was able to walk abroad; he publicly declar'd that from the first time my Medicins were applied, he felt no more Pain in or about the Wound, than if he had never bin hurt at all.

Experiment V.

MR. *Pool*, a privat Gentleman in the Honorable Brigadier *Lumley's* Regiment, in the Troop of Capt. *Billingly*, was near his Majesty's Quarters at *Rosebeck*, with a Sword run into the Stomach: he had immediately a very great Flux of Blood, both at the Wound, and at his Mouth; but that at his Mouth was far the greatest. Several of the Servants belonging to his Majesty, who saw him bleed, do positively declare, that, according to a modest computation, he lost at both places two *Field-measures*, which are four English Quarts of Blood, before my People came to him. He was so convulsive, that all who saw him, thought it impossible for him to live an hour: but my Medicins being us'd according to the usual Method, the Flux of Blood immediately stopt; and he, as almost all my Patients have, declar'd that within a minute or two after taking the Tincture, he found himself refresh'd and reviv'd beyond expression; and presently his Convulsions left him, and that Night he slept very well. On the

the morrow a Rumor, by whom rais'd I know not, was spread about the Court, that he was dead; but my Friend Mr. *Sell*, a Page of the Back-stairs to his Majesty, going to the Tent where he lay to enquire into the truth of it, instead of finding him dead, saw him heartily knawing of, tough, ill boil'd Mutton, which he forbad him to do; so he left off, but withal said, *Sir, if I must not eat, I'll drink to you*; then took up a Quart Pot of strong *Mecklin* Beer, and drank it off. About 3 days after the Army march'd from *Rosebeck* to *Mount St. Andrew*, and he in a Waggon to *Tirlemont*: But next day, there being a Rumor that the Army was to engage, he came from *Tirlemont* to the Camp. His Captain asked him what he did there; he answered, *That he came to fight*: the Captain replied, *Sure you have enough of Fighting already*; No, says he, *I fear not Fighting now, and tho I was so lately wounded, and lost so much Blood, I am as able to fight as any Man in the Regiment*. This Discourse between his Captain and him he told me of on Sunday Morning, which was but five days after he was wounded. About three days after he was seen by his Majesty and several great Officers, being then very well, and so continu'd till I left the Camp.

Experiment

Experiment VI.

A Privat Soldier, in the Regiment of Col. *Collingwood*, had with a broad Sword, his *Sternum* or Breast-bone divided; the Sword likewise past into the Body of his Lungs. From the Wound gush'd forth such a vast Quantity of Blood and Air together, that Mr. *Chomly* declared, he could scarce with his Hand keep on a Dressing; so to bring the Lips of the Wound together, with a Needle and Thred he sew'd up the Wound; but the Force of Air was so great, the Flux of Blood being before stopt by my Medicins, that he was forc'd to make his Stitches in the external part of the Bone, which is gristly, the Skin not being strong enough to hold them. The Man was for that Night attended with most dangerous Symtoms; but on the morrow, continuing to take the Tincture, they left him: He staid in the Camp three days very well, only weak with the great loss of Blood. The Army being to march, his Weakness was such that he could not walk far on foot; so, contrary to my knowlege, he was sent to the Hospital, but wanted no other assistance there, than to recover his Strength: He staid there som small time, but is since return'd to the Camp vigorous and well.

Experiment

Experiment VII.

A Privat Soldier, in the Regiment of Sir *James Lesley*, was also wounded in the Lungs; and Sir *James* himself told me he was by several Chirurgeons given over for dead. His Wound had bin a Fortnight or more receiv'd, and was in a very ill Condition: he had a great quantity of Blood discharg'd into the Cavity of his Breast, which lying there so long, vvas degenerated into the most stinking sort of *Pus* or Matter; and had likewise a most violent Fever. Yet notwithstanding his Condition vvas such, by the repeated use of my Tincture, he was in 24 hours freed from his Fever, and had all the corrupted Matter thrown out of his Breast; and his Wound, by twice applying my external Medicin, in a week's time vvas cur'd.

Experiment VIII.

MR. *Wright*, a Quarter-master in the Regiment of Col. *Langston*, vvas vvith a Sword run in just below the right Arm-pit; the Sword past thro the middle of the Lungs about ten Inches. He had immediatly a great Flux of Blood, both at the Wound and at his Mouth,

Mouth, vvith a great shortness of Breath, and violent Convulsions. Lieut. Col. *Morton* being at hand, and having som of my Medicins by him, sent his Man for them; vvhich vvhen he had brought, he gave him Directions how to apply them. The Colonel told me afterwards, he never saw so sudden, and so great an Alteration in any one in his Life: For that just before he took the Tincture, he had so violent Convulsions, and such a shortness of Breath, that himself and all that saw him, thought him near expiring; but in a few minutes after taking it, those Symtoms totally left him. But the poor Gentleman fearing something might be omitted, sent for me; but I being otherwise busy, sent Mr. *Chomly* and Mr. *Hamstead* to him, vvho found every thing vvell: but for security, Mr. *Hamstead* staid that Night vvith him, and in the Morning brought me vvord, that for the first part of the Night he vvvas somewhat restless; but about two a Clock he began to sleep, and continued sleeping till he came away. That day I vvvent to visit him, and found him in a very good condition, free from a Fever, or any disorder in or about his Wound; only he spit Blood a little, vvhich, I suppose, vvvas occasion'd by a Cough he had for seven Years before, vvhich being violent, besides the ordinary Motion of his Lungs, must necessarily much impede the healing of 'em vvhen vvounded: Notwithstanding vvhich, in four or five days he vvvas
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able to vvalk abroad, being very vvell, only vvweak vvith great los of Blood. Six weeks since he vv as vvounded, I frequently saw him at *Ghent*, vvhen he told me, he vv as as vvell as he had bin for several Years.

Experiment IX.

A Soldier in the Regiment of the Right Hon. the Lord *George Hamilton* (now Earl of *Orkney*) being out a foraging, vv as vvith a Bullet, or rather tvvo, shot thro the back part of his Hand; the Bones of the *Meta Carpus* vv ere all shattered to pieces, and the *Tendons* much torn, vv hich vve could plainly see, the Wound being so very vv ide. It vv as first drest by Mr. *Willy*, Chirurgion to Col. *Selwin's* Regiment, being receiv'd about ten a Clock in the Morning. I being that Afternoon at his Majesty's Quarters, my Lord told me of the Accident, desiring me to take care of the Man: Accordingly, about nine in the Evening, I vv ent to his Tent, and sent for Mr. *Willy*, vv ho told me, that the Man's Hand, by the common Methods, could not be sav'd; but if I could do it, he vv ould stand my Friend against all Opposers: So I requested him to pull off his Dressings, vv hich vv ere only Pledgets of dry Tow; vv hich having don, Mr. *Chomly* applied my external Medicin, and gave him the Tincture in a large Draught

Draught of *Old-hock*. His Hand and Arm vvere much swel'd and inflam'd, and he in most intolerable Pain. On the morrow I vvent again to see him, and found both Swelling and Inflammation gon, and he at ease. About four days after Mr. *Chomly* opened the Wound, to make a fresh Dressing, vvhich vve found in a very good Condition, and not in the least digested, or brought to Suppuration: but a thin ferous Matter, a little tinged with Redness, vvhich I suppose to be discharged out of the Glands and lymphatic Vessels, came away, which when it had lain som time upon the Dressings, vvas subject to stink; but that which came fresh out of the Wound, was as sweet as a Rose: This Substance vvas quite different from vvhath vve call *Gleet*. The next time it vvas drest, it look'd better than before, and he could begin a little to stir his Fingers; at this Dressing (his Comrade next to be mention'd being also then drest) a great many Gentlemen and Chirurgeons out of Curiosity were by, vvho all declared they never saw any Wounds look so vvell in their lives; and then he could stir all his Fingers. Within a fevv days the Army began to march, and he vvalk'd every Day of the long March, unless it vvas the first, vvhen I got leave for him, and his Comrade in Affliction, to ride three or four miles. Before vve came to the end of the long March, he told me he could lay the vvounded Hand on the Back of a Horse of 15 Hands

Hands high, and without any other assistance, leap upon his Back. He had at several times at least fifty small pieces of Bones came away ; and after they were all discharged, his Hand was suddenly well.

Experiment XI

ANother Soldier of the same Regiment was at the same time wounded in three places of his Body. He had two Bullets, at about an Inch and half distance, enter'd near the middle of his Back on the right side, and were cut out by Mr. *Willy* about seven Inches from their Orifices on the same side. Another Bullet enter'd a little below on the same side, and was cut out just above the Navel, being about nine Inches from its first Entrance. Tho the other two had not, grazing upon the Ribs, yet I have great reason to believe this did penetrate the Cavity of the Body. This Man we found in most intolerable Misery, having a violent Fever ; and the last mentioned Wound, in all appearance, began to mortify, both Orifices looking very black, and a very ill smell coming from them. Mr. *Chomly* applied my external Medicin, and gave him the Tincture, which, according to Custom, was repeated in five or six Hours. His Pain and Fever lasted about 30 Hours, when they both left him, and in three or four Days he walked abroad.

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When he was next dress'd, which was about four Days from the first Dressing, the two first Wounds look'd very well, but the last not so well. But at the third Dressing there came out of the last Wound many Pieces of his Clothes, and that without any Digestion at all, only a great Quantity of the foremention'd ferous Matter came from all the Wounds. In about 3 Weeks all the Wounds were filled with good Flesh, and only wanted skinning; but being forc'd to march with the Army on Foot for many Days together, the great Motion of his Body, with the moving of his Clothes, fretted the wounded Parts, and kept them from skinning, and likewise caus'd a little proud Flesh to grow up, which, when he came to have a little Rest, soon vanished, and the Wounds were presently well.

Experiment XI.

AN Ensign in the Honorable the Lord Bel-
castle's Regiment, in defending a Pass
against a Party of *French*, was with a Musket
Bullet wounded in the Head; it entred a little
below the Temple, past on, and tore the *tem-*
poral Artery asunder, and graz'd further on the
Skull about four Inches. By his Majesty's
Order I went to take care of him; when I
came, I found he had bin dress'd by the Chirur-
geon of the Regiment, whom I sent for to pull
off

off his Dressings, which were hard Dossels of Tow dipt in Spirit of Wine, he having cram'd the Wound, which was an Inch wide, with 'em as full as it could hold. After his Dressings were off, Mr. *Chomly* applied my external Medicin, and gave him the Tincture. His Head and Face were much swel'd, and he somthing feverish. On the morrow I went to visit him, when the Swelling was quite gon, and his Fever left him; and in about a Fortnight, his Wound, tho so wide, without being brought to Suppuration at all, was perfectly well. In the mean time he never confin'd himself to his Tent, but march'd on Foot with the Army, and declared, that from the time my Medicins were applied, he felt no more Pain, than if he had never bin hurt.

Experiment XII.

A Privat Soldier in the Regiment of the Honorable Major Gen. *Le Mallinier*, was wounded at the same time with the fore-mentioned Officer; but of him I had no notice till the Morrow, when the Major General, I being at the Officer's Tent, sent to me, desiring me to take care of him. I found he had before bin dress'd by the Chirurgion of the Regiment; for whom I sent to pull off his own, and apply my Medicins, Mr. *Chomly* not being with me. The poor Man had one

Musket Ball enter'd at the corner of his right Eye, and passing thro the *Os Spongiosum*, or spongy Bone of the Nose, came out at the left Eye, tearing that all to pieces. Another Bullet enter'd at the last Orifice, past thro the upper *Mandible*, or Jaw-Bone, and came out at the corner of the under one. These two Wounds were cram'd as full as they could hold with hard Dossels dipt in Spirit of Wine, which I order'd to be pulled out: which tho perform'd with the greatest difficulty imaginable, and putting the poor Creature to most intolerable Pain; yet his Bravery of Spirit was such, that he never so much as smayed at it all the time it was doing. After the Chirurgion had, as he said, pull'd out all the Dossels, I desired him to inject som of the Solution of my Pouder thro both the Wounds; thro the first it past very well: and tho we tried at both the upper and lower Orifice of the last, we could not get any thro; so I concluded there must be still som Dossels behind, as it afterwards appeared; but the Wound being very deep, he could not com at any of 'em with his *Forceps*; so we were forced to bind it up as it was. His Head and Face were swell'd to such a prodigious Bigness, that he look'd like a Monster; he had likewise a violent Fever, which by the taking of my Tincture was soon abated, and in two Days the Swelling of his Head and Face was quite gon down, and he free from any Pain at all, tho there were still

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still 3 large hard Dossels left in the last Wound. About five Days after he was wounded, the Army began to march, and he on Horse-back went the whole March; and tho exposed to Wind and ill Weather, felt no Pain or Disorder in or about his Wounds. About the sixth Day of the March, Mr. *Chomly* having pull'd off the Dressings to make fresh ones, the Dossels of the thickness of a Man's Thum came out at the upper Orifice of the last Wound, without any trouble or pain at all: At that time the lower one was almost clos'd up, and afterwards the upper one began to mend apace; in a little time his Wounds were cured, and he is now in this City very well, his Face not in the least disfigured, only by the loss of his Eye.

Experiment XIII.

MR. *Lorridg* a Lieutenant in the Hon. Brigadier *Lumley's* Regiment, in a Rencounter receiv'd a slight Wound under the right Arm-pit, the *Axillary* Artery being also prick'd; on which ensued a large Flux of Blood, which was soon stopt, or rather pent in, by Mr. *Englisb*, Chirurgion to the Regiment. He was about a Month manag'd by Mr. *Englisb*, and Mr. *Hall* principal Chirurgion to the English Hospital: After which he had a fresh Flux of Blood; and before he had

any Help, I suppose by what I saw in the Bed, and in his Breeches, he lost 7 or 8 Pound of Blood: At last the Chirurgeon's Mate of the Regiment coming, with a very strait Ligature stopt the Bleeding; and then sent for Mr. *Hall*, who immediatly came, but seeing how the case stood, sent for som of the most eminent Chirurgeons in *Ghent*, where the Lieutenant then was, to his assistance. They were at least 5 hours using their utmost Endeavors to stop the Flux of Blood, which, tho they several times used red hot Irons, they could not do. At last Mr. *Hall* came to me, and desired me to go along with him; which, tho I knew that on all occasions he had spoken reproachfully of me, I readily granted. When I came, I found the poor Gentleman in a deplorable condition, his Arm being most prodigiously swel'd, and absolutely mortified by their hard Ligature, from his Fingers ends to his Shoulder, and his Spirits so exhausted by the loss of Blood, and the intolerable Pain they had put him to, that it was impossible he should survive many hours: yet when the Ligature was never so little loosned, the Blood rush'd forth as violently, as I believe it had don at all. However, to be serviceable to an honest Gentleman in distress, in any manner I could, I prepar'd my external Medicin, which Mr. *Hall* applied; then I order'd the Ligature to be undon, and the Blood seem'd to be stopt: but in a minute, or therabouts, a
small

small quantity issued forth, which we concluded was occasion'd by the Medicin's not sufficiently coming to the Mouth of the Artery, which was so drawn up, the Artery being then totally divided, that the end of ones Finger would scarce reach it; but be it how it would, for security we pull'd off that Dressing, and made a second, which totally stopt the Flux of Blood, without any Ligature or Compress at all. He lived about 5 Hours after; and tho he was very restless, and struggled much, yet there did not one Drop of Blood more appear. I only mention this Experiment, to demonstrate on what slight Occasions many lose their Lives by the common Methods, and how easily such Accidents may be prevented, if my Medicins are timely enough, and regularly used; as in the case of this poor Gentleman: for had my Medicins bin used before his Arm was mortified by their hard Ligature, the Flux of Blood would easily have bin stopt; and then he could not, morally speaking, have miscarried.

Experiment XIV.

I Being at a Coffee-house in *Ghent*, Sir *Wil. Russel*, a Captain in the Regiment of Col. *Coy*, came to me, and desired me to meet him in the Afternoon at a Tavern, to look on a Man's Hand of their Regiment that was hurt, which I readily granted. According to promise,

mise, I went, and found him and the Trooper together. After I had examin'd the Man about his Wound, which had bin receiv'd a Fortnight, his Hand and Arm being mightily swell'd and inflam'd, and he in most intolerable Pain, I desir'd him to send his Comrade for the Chirurgeon, who had before look'd after it, which accordingly he did ; but the Chirurgeon either would nor, or was asham'd to com. So, at his request, I open'd the Wound my self, which I found in a most lamentable condition, and beginning to mortify. The Sword enter'd about the middle of the Palm of his Hand, and came out at the top of his Wrist, the two Orifices being about 6 Inches asunder. The Wound being so very deep, I sent my Boy for a Syringe, with which I injected som of the Solution of my Pouder thro the Wound, and afterwards gave him a large Dose of the Tincture in a Glas of Wine. We had not sat above a quarter of an hour, but the poor Man pul'd off his Hat, returning me Thanks in the most affectionat manner imaginable, saying, *Sir, when I came into your Company, I was in most intolerable Pain and Misery, from which I was not to expect deliverance but by the loss of my Arm ; but am now as much at ease as ever I was in my Life.* This was about the 23d of September ; and since my return to England, I received a most obliging Letter from Sir Will. Russel, dated the 3d of October, wherein he tells me, that
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contrary to his expectation, the Man's Hand was perfectly well.

I could add a great number of Cures wrought both in *London*, and other Parts of *England*, since the first publishing this Tract; but such as will not be convinc'd by those already mention'd, will not, should I add a hundred more.

*Directions for the use of the Vulnerary Pouder,
and of the Tincture of the Sulphur of Venus.*

SUCH a Quantity of the Pouder as will lie on a Silver Penny, may be dissolv'd in a full Spoonful of warm Water; where that cannot be had, you may take Urin. In this Solution you may wet a Pledget, made either of fine Tow or Lint, with which lightly dab the Lips of the Wound, and then squeeze a small quantity of the Solution into it. Then you may apply your Pledget, and bind it on. If the Wound be an incised one, after the Medicin is squeez'd into it, it will be convenient to stitch the Lips together with a Needle and Thred, and then apply the Pledget. Now in incised Wounds, when these Medicins are applied as soon, or a little after the Wound is received, one Dressing is for the most part sufficient, but two are as many as ever need be used; the second Application to be made at the end of 3 or 4 Days: But in Gunshot Wounds, or where there is great loss of Substance, more
Dress-

Dressings are needful, and to be repeated once in about 4 Days. If the Wound be very deep, whether it be an incised or a Gunshot one, instead of squeezing in the Solution, it is necessary it be injected with a Syringe.

As for the Tincture, in all very large flesh Wounds, and those within the Cavity of the Body, it ought to be taken once in 5 or 6 hours, and continued 4 or 5 days: The Dose is half a Spoonful in a Draught of any good Wine, but *Old-Hock* I find best. In slight Wounds to be taken twice a Day for 2 or 3 Days: Tho if it be taken longer it can be no way prejudicial, but the contrary.

In great Fluxes of Blood it will be convenient to hold on the Pledget wet in the Solution with your Hand, till the Flux ceases, which in the greatest Fluxes will generally be in a small time; and afterwards to use very easy Bandage.

I have observed, that in those Wounds where there is little or no Flux of Blood, the weaker the Solution is made, the better; and where there are large Fluxes of Blood, for the stopping of 'em the Solution must be made as strong as may be: but after that is don, a weak Solution will sooner finish the Cure than a strong one.

Where there is only a *Cicatrix* wanting, or for the Cure of old Ulcers, I have found a small quantity of the Pouder dissolv'd in the White of an Egg (which it will immediatly turn into a stiff *Gelatinous* Substance) to do much better than when dissolv'd in any other Liquor.

Novum Lumen Chirurgicum
Vindicatum :

OR, THE
NEW LIGHT
OF
CHIRURGERY.
VINDICATED

From the many unjust Aspersions of several unknown Calumniators.

With the Addition of som few Experiments made this Winter, 169⁴₅, in England.

By JOHN COLBATCH, *a*
Member of the College of Physicians.

The Third Edition:

L O N D O N,
Printed by J. D. for D. Brown, 1698.

To the Honorable
 WILLIAM BLAITHWAYT, Esq;
 Secretary of War.

S I R,

MY Adversaries having dedicated
 a Piece to You, wherein
 they desire Your Patronage
 of Truth, which they pretend to be
 on their Side; I being likewise sufficient-
 ly satisfied that the Greatness of Your
 Soul is such, as not to be amused
 with specious Pretences, have presum'd
 also to dedicate this Tract to You:
 which, tho I have not had time to put
 into any Order, yet it contains most
 indisputable Truths.

I beg no other Favor of You, than that if Truth inclines to my side, You will afford me Your Patronage, which my own Experience is sufficient to assure me, that my Request will be as readily granted as desired. I am,

S I R,

Your most obliged

and Obedient

Servant to command,

JOHN COLBATCH.

TO THE
 READER.

ON the 18th day of this instant April 1695, there came to my Hands a little Libel set forth by my old Friends the Surgeons. At first I thought it would not be worth my spending any time in writing an Answer to it; till at last I concluded, That if I should be altogether silent till the end of the Campaign, they might in my Absence triumph amongst themselves, and make the unthinking Part of the World believe I had given up my Cause, and yielded all for lost. To prevent which, I have (in the midst of my Multiplicity of Business) spent a few hours in composing the following little Tract; which tho I must own to be full of many Imperfections, yet it contains nothing but Truth: and therefore for Truth's sake I doubt not but the Candid Reader will pass over those other Failings with which he may meet.

The Charges laid against me are very numerous; and were they but as true, I must of consequence be the most vile Creature alive.
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But I having bin used so much to the Scur-
rility of some of that Fraternity, there is
nothing but I can bear from them. And in-
deed I should be to blame, if I was not con-
tent to give Losers leave to speak; and so much
the more, by reason that their Diana (I mean
their ill Practices being detected, the World
will be so wary as to have a care of them) is
falling into Disgrace; to keep up whose Re-
putation (tho to the great prejudice of Man-
kind) they will not fail to make their utmost
Efforts: A drowning Man will lay hold on
every Twig. To be sure, if making a Noise,
and using ill Language, will do any thing to-
wards the Preservation of their sinking Credit,
that shall not be wanting.

As I have before said, so I say it again,
That both the City of London, and the Eng-
lish Army afford a great many Surgeons, who
are Men of extraordinary Worth, from whom
I have received many Civilities; and instead
of being discouraged by them, I have bin to
the utmost of their Power assisted in carrying
on my Designs.

I have had occasion to mention Mr. Ber-
nard's Name, which I could not possibly a-
void: But I am so far from charging him
with any thing unfair, that there is nothing
more; for I can hear of no one person who
has at any time heard him declare, That the

Man

Man at the Hospital bled again after my Poudre was applied, and had stopt the Flux of Blood. Nay, I have bin inform'd that he was altogether against the publishing of that scandalous Libel, telling the Authors, that it was in vain to write against Matter of Fact. Whether this Relation be true or not, I am not certain: But of this I am sure, he is a very great Man, and the Honor of his Profession; and I verily believe he scorns a mean Action. I heartily wish I could say the same of Mr. Cooper and others, from whom I never deserved ill.

There was scarce an Experiment I made last Year in Flanders, but there were several Officers Spectators; so that if I had not perform'd what I pretended to, I must quickly have bin detected. But I thank God my Success was such, that I have gained the good Will of most Officers of the Army, whose Words will (I suppose) go further with all considerate Men, than the scandalous, malicious Reports of some interested Surgeons.

Tho I have no immediat concern in the Medicins here recommended, yet my Reputation as much depends upon the Success or Non-success of them, as if they were still at my own disposal; and therefore I think I am obliged to acquaint the World, that the right ones are only to be had of Mr. Brown the

Bookseller, and Mr. Raddison, the Persons deputed to dispose of them by the present Possessor.

There are several Persons about the Town, who have endeavored to imitate these Medicines, and afterwards to sell them in my Name; but whosoever shall buy any, except of the Persons before mentioned, when they find themselves frustrated in their Expectations, I hope will not blame me, having given them this fair Warning.

*From my House in Villers-
street, York Buildings.*

Novum

Novum Lumen Chirurgicum Vindicatum :

OR, A

VINDICATION of the *New Light*
of *Chirurgery*.

THere having lately stoln into the World a scandalous Libel, intitl'd, *Novum Lumen Chirurgicum Extinctum*, wherein the Author, or rather Authors (I being very well assured, that it was compos'd by a Club or Cabal of Surgeons) pretend to ridicule notorious and known Matter of Fact; and he or they pretending to detect Imposture, and to vindicate the Cause of Truth, I leave it to the impartial Judgment of any rational, sober Person, whether the Author or Authors had any reason to conceal their Names. I confess there are the two initial Letters of a Person's Name prefix'd to the Title Page; which if they answer to the Person I have som reason to suspect, had his Name bin written at length, his Life and Conversation are so very scandalous (he having last Year bin cashier'd the Regiment to which he belong'd for his scandalous way of Living, as I have bin credibly inform'd by som of the Officers of the said

Regiment) that it had bin sufficient to have deter'd any one from reading more than the Title Page alone.

The Authors have taken care to send this Libel into the World at a time when I am full of business in making my Preparation for *Flanders*, and just upon the point of going, and therefore not capable of writing so full an Answer as otherwise I would have don, and which may be expected at the end of the Campaign; and also when the Officers of the Army, who would have bin my Compurgators, are gon out of Town.

Mr. *Hall*, Surgeon to the Honorable Col. *Fitz-Patrick's* Regiment of Fusileers, who had a considerable hand in writing this Piece, brings in the Major and two Captains of the said Regiment to justify a most notorious Untruth; of which, when it shall com to their knowledg, I suppose he will have sufficient cause to repent.

As for what they say concerning the Dogs wounded before the Right Hon. the Lord *Cutts*, and the Soldier wounded upon *Tower-Hill*; if I had time, I could sufficiently make appear the Truth of every tittle I said in my Preface on that Subject; and whoever will give himself the trouble of going to Mr. *Sterkey* Surgeon upon little *Tower-Hill*, will be satisfy'd that the Man's Case was most deplorable, and quite contrary to what they relate.

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They say I have deserv'd ill of most Surgeons; which is no otherwise true, than if to be civil, and shew respect in the highest degree, be to deserve ill. For I defy any one of that Fraternity to say, I ever denied them to shew what Experiments they desired, and to let them see my Patients dress'd on all occasions.

And since Mr. *Cooper* is by them trump'd up in relation to the Experiments made at St. *Bartholomew's* Hospital, I shall represent that whole Business to the World, and leave it to any impartial Person to judg whether I was fairly dealt with, or not.

Having made som Experiments before Mr. *Cooper*, &c. first upon a Dog, making an Aperture in his *Abdomen*, then taking out one of his Small Guts, and wounding it, of which he was in 3 or 4 Days well; then cutting off one of his hinder Legs as close as possibly we could to his Body, and immediatly stopping the Flux of Blood without any hard Bandage, to the great satisfaction of all the Bystanders: I was desired by one of the Master-Surgeons of the Hospital to try my Medicins upon two Persons, who were to have the one a Leg, and the other an Arm cut off, which I readily granted. The Day before these Operations were to be performed, I receiv'd a Letter from the said Master-Surgeon, requesting me to com alone, and to bring no one with me, that a Croud might be avoided, and his Brethren not displeas'd, (which I leave to any one to

judg whether it did not look as if there was som Design, as the Sequel will demonstrate.) Accordingly I went to the Hospital, having no one with me but my Boy of about 14 Years of Age. But (to my great surprize) when I came there, I found at least twenty of their Fraternity. However, knowing the Justice of my Cause, I staid to perform the Business about which I came. I confess my Pouder was two or three times applied before the Fluxes of Blood were stopt, but the irregular application of it by one of themselves was the occasion of it: And after the Fluxes were stopt, there was no other than mere retentive Bandage used, which is more than what any of them can pretend to with their most celebrated Medicins. After our Patients were drest up, and laid to Bed, we went all to the Tavern, where every one seem'd to express great Satisfaction in what had bin don. The next Morning, being at *Tom's Coffee-house* in *St. Martins-lane* with one *Mr. Clark*, I met with a certain Physician who told me that all was undon, for that one of the People had bled afresh; and if *Mr. Bernard* had not bin at hand to have taken off mine, and applied his own Medicins, he had bled to Death. The Truth of which I had no reason to believe, having sent one the Night before, and another that Morning, to make strict enquiry how they did, who brought me word they were both very well, but mentioned nothing of any

such Accident: However, that I might be satisfied exactly in the truth of the Report, I immediatly went to the said Hospital, taking Mr. *Clark* with me. In our way we met Mr. *Blackstone*, Apothecary to the Hospital, who told me the same Story the Physician had. When we came to the Bed where the Man lay, whom they said had bled again; before I was capable of speaking to him, he rose up in his Bed, and prayed most heartily for me, telling me he believed no man, that ever had an Arm cut off, was so well as he: on which I ask'd him, whether he had not bled again after I left him; he reaching out his Stump to me, did solemnly protest, that those very Dressings were the same that were put on in my presence, and that they had not in the least bin touch'd from the time I saw him. I likewise ask'd him how he had bin for Pain; to which he replied, That for 4 or 5 hours after the Amputation, he had som Pains occasioned by an Inflammation just above the Stump; but that he slept well all Night, and was then perfectly at ease. We afterwards went up to the Boy, who told us the same the Man had don, saying he was perfectly at ease, and had slept well all Night. Som other Surgeons having said the same thing in relation to the Man's bleeding, I desired Mr. *Colbatch* a Stationer in *Cornhil*, and Mr. *Fisher* a Surgeon in *Aldersgate-street*, to go to the Hospital, who being Strangers, the People would relate the whole Truth to them;

but instead of either of 'em owning they had bled, they declar'd they were infinitely oblig'd to the Person who made the new Experiment upon them, for that they were well to admiration. These Operations were perform'd (to the best of my remembrance) on a Tuesday; and the Friday following I was desir'd to be at the same place again, to perform the Operation upon another Person: but finding this ill Usage, I sent Mr. *Baker*, a Surgeon in *Suffolk-street*, who was wont to make my Experiments for me, with som other Friends, to be as Witnesses, and desir'd by Letter, that Mr. *Baker* might make the Application of my Medicins; but there being about six Witnesses of what might be don, they refused to let Mr. *Baker* do it, and defer'd it to another time. I likewise in the same Letter requested I might have notice given me, when the two before me tiued should be opened, that I might be present to see how the Stumps looked, which no body but will own was fair: But to be shorr, I was put off from time to time, and never admitted to see 'em at all. Now, if what I have said on this Subject argues not a Combination, I know not what dos; and for the truth of all, when I am at leisure, I will have it sufficiently attested before a Magistrate; nay the Man and Boy (tho reported to be dead) will both assist in confirming the truth of this Relation.

As for the Case of poor Capt. Rogers, I know nothing of it, but was told by one Capt. of Sir *James Lesley's* Regiment, at *Man's* Coffee-house, before Mr. *Baker* and others, that Capt. Rogers being open'd after he was dead, his Heart was found to be pierc'd. Whether he saw this himself, or heard it related by another, I am not certain; but he declar'd, on his certain knowledg my 7th Experiment was true to a tittle, it being made on a Soldier of the Regiment to which he belonged.

As for Mr. *Dun*, I know no more than this, that he being in a Public Coffee-house, where there were at least twelve People, complain'd of two or three Wounds he had receiv'd by a Cock's Spur, and that there had bin something applied by another Surgeon; his Hand was much swel'd and inflam'd, and he in great Pain, and fear of som further ill Consequence: so he requested me to apply my external Medicin, which I did, and gave him som of the Tincture in Ale: in about a quarter of an Hour he declar'd before all the Company, that his Pain was altogether abated. On the morrow he came again, and desired me to make a fresh Dressing, which, finding his Hand like to be well, I refus'd, telling him one Dressing was sufficient. Now he being unaccustom'd to such sort of Methods, thought I had slighted him; and therupon applied himself to Mr. *Johnson*, who every body

body will allow, advised him to take off my Dressings, and make use of his; so what became of him after, I know not.

My time will not permit me at present to make Remarks upon the whole, for which however I shall take a convenient Season: And the World may expect my full Vindication; for it is the Cause of Truth for which I contend, and therefore am not ashamed to fix my Name to it. I confess (to use the Words of the Famous Mr. Lock) *the Imputation of Novelty is a terrible Charge among those who judge of Mens Heads, as they do of their Perukes, by the fashion, and can allow none to be right but the receiv'd Doctrins.* Truth scarce ever carried it by Vote any where at its first appearance: New Opinions are always suspected, and usually oppos'd, without any other reason, but because they are not already common: But Truth, like Gold, is not the less so, for being newly brought out of the Mine. 'Tis Trial and Examination must give it Price, and not any antic Fashion: And tho it be not yet current by the public Stamp, yet it may for all that be as old as Nature, and is certainly not the less genuin.

I did expect my Hypothesis would have bin overthrown, and a better erected in its place, for which I should have thank'd 'em; but instead of that, I find they have neither subverted mine, nor set up a new one of their own, but have stood at a distance and bark'd at me, shewing their Teeth, but either durst not or
could

could not com near enough to bite me in that place where I lay open to them. For as in building a House, so in laying down a Hypothesis, no Man can be certain, that, he who coms after, cannot erect a better Fabric.

But for my Experiments, relating them as Matter of Fact, I am obliged to stand by them; and I defy all their united Force in the least to overthrow them.

To the number of my Experiments, I shall add two or three made in *England*.

Experiment I.

A Servant belonging to Mr. *Norris*, a Member of Parliament for *Liverpool* in *Lancashire*, driving a Cart, by accident fell down before the Wheel, which running over his Head, divided the Scalp from off all the hinder part of it; and, as Mr. *Norris* said, the Scull was altogether as bare as if scrap'd with a Razor, for the breadth of 3 or 4 Inches; his lower Lip (by a Splinter, or som such thing) was divided the length of an Inch or more. The Man was presently brought in to Mr. *Norris*'s House, who says, he was the most miserable Spectacle he ever saw; but having som of my Medicins by him, he gave his Maid Directions how to use them. She made a Solution of my Pouders in Water, and with it wash'd the Scalp and Scull to free them from

from Dirt and Sand that were lodg'd upon them; then she laid the divided Scalp on its proper place, and bound it up; then stitch'd up the Lip, and made an Application. Mr. *Norris* has several times publicly declared in the *Grecian* Coffee-house in *Essex-Buildings*, that in 4 days both the Man's Head and Lip were perfectly well. He likewise said, that the Flux of Blood was so great, that he believes the Man could not have lived, whilst they sent 3 Miles for a Surgeon, unless my Medicins had bin applied. He says the Curiosity of the thing was such, and the Cure so speedy, that it drew a great many Surgeons of the Country therabouts to see the Man, and to be inform'd exactly of the Wounds, and the manner of the Cure; who all declared, they did not believe there had bin such a thing in Nature, and that if they had bin sent for, they could not have told what to have don. If Mr. *Norris* be gon out of Town, there are many Gentlemen who frequent the *Grecian* Coffee-house, that have heard him relate this thing, and can testify to it. I must beg Mr. *Norris*'s pardon for using his Name, without first asking leave; but since I was oblig'd to it in vindicating Truth, I hope it will be the more easily excused.

Experiment

Experiment II.

Perform'd by Mr. Baker at my Order, which compar'd with the 13th Experiment in my *Novum Lumen* (I suppose) confirms the truth of what I there say.

ON the 8th of March in the evening, I was sent for to one Roger , a Corporal in the Company of Capt. *Armstrong*, in the Regiment of Col. *Tiffany*. Mr. M. a Surgeon in *Bloomsbury* was then with him, who had dress'd him from the time the Wound had bin receiv'd, which was about 11 Days before, it being given with a large Bagonet Sword. It enter'd about the middle of the Leg, between both *Focils*, glancing on the *Tibia*, and so pass'd on, and went almost thro: For the Point of the Sword made a sort of Tumor in the Calf; it wounded the Artery, but that lying very deep, the Flux of Blood was not violent. He dress'd it that time, and so on for about 5 Days, it bleeding now and then, but not much; in which time the Wound was much enlarg'd; for at first he could not have put in above 4 or 5 Dossils, but then 20 perhaps or more, as both Mr. *Armstrong* and all the Family told me. On the fifth day it bled with that Impetuosity, that it frighted the whole Family:

ly : He stopt, or rather pent in the Blood with good store of Dossils and tite Bandage. It continued bleeding thus at times for many days; in which time (as the Family told me) he lost about 12 or 14 Pints of Blood, even so much, that he look'd like a perfect *Skeleton*; his Hands were shrivel'd, and as yellow as a Hawk's Foot. But on the 11th day after the Wound was inflicted, he bled again with the greatest Violence imaginable, which was the reason I was sent for. When I came, Mr. M. asked me whether I thought I could stop the Flux of Blood. I answered, I hope I can: For he had declared before, that nothing but Amputation could save his Life. He then open'd the Wound, pulling out most of his Dressings; the Wound was so large, that 4 or 5 Fingers would easily have gon into it. The Dressings were not all pul'd away with Mr. M's *Forceps*, but the Blood rose in a most violent manner: I can liken it to nothing but to a Hole dug in the Ground (of about two Foot Diameter) over a Water pipe, in which, if you bore a large Hole, after the Ditch is full to the Brims, and runs over, the Water boils up in the middle somewhat high; just so did the Blood. I put my Forefinger into the Wound, could feel both Bones very plain (but not the bottom of the Wound) with the violent Pulsation of the Artery; I really believe the Artery was almost, if not totally divided. The Leg was swell'd to the highest

de-

degree, the Blood being extravasated, and filling up the *Interstices* of the Muscles (having bin so often, both by too tite Bandage and Dossils, pent in as it were by main force, till the greater force overpowered, and made its way thro all) so that besides the often Bleeding, nothing less than a Mortification was to be fear'd. But having made my Application ready, I injected som of the Solution of the Pouder into the Wound, but it was wash'd away by the Impetuosity of the Flux before it could arrive to the wounded Artery: However, with soft Pledgets dipt in the Solution, I drest it up for that time, and the Flux seem'd to be stopt; yet it bled somewhat that Night, but with no great violence, and soon stopt again. It did so twice or thrice, so that I was satisfied, unless I could empty the Wound of the Blood, and com to apply the Medicin to the Artery itself (the Case being quite different from what it had bin, had the Wound bin a fresh one, the Parts being all perfectly rotten, as will appear by the Sequel) I had little hopes of staying the Flux; on which I made use of the *Turnicat*, compressing the Vessels in the Ham, which retarded the impetuous Course of the Blood; so I emptied the Wound as much as I could, and applied the Solution with a Pledget to the very Artery, and filled the rest with soft Tow, using no Compress, only retentive Bandage. He had little or no Pain from the first time these
Medi-

Medicins were applied, except a little tense pulsific Pain before the Flux was totally stoppt. After this Application, not one Drop of Blood appeared, nor did it ever bleed afterwards, tho I dressd him not in 5 or 6 Days; but in the mean time the Swelling abated, and from the Wound was discharged a quantity of coagulated, corrupted Blood. I continued dressing him with the same Solution only 4 or 5 times, in which time he was remov'd from his Masters House in *Southampton-street, Bloomsbury*, to a Nurse's near *Soho-Square*. The Day after his Removal I dressd him, and with the Cloth applied over the Wound there came away a large Core made up of the contused rotten Fibers, coagulated Blood, and som Dossils which Mr. M. had left in the Wound; this was about 3 weeks after I first saw it. The Wound within look'd very ruddy and well, but the side of the *Tibia* or Shinbone (by which the *Musculus Anticus* lies) was bare, without any *Periostium*, about two Fingers in length. There was an extraordinary Cavity after the Core was discharged, and much Matter of a very ill smell, which obliged me to dress him oftner than usual; this Matter was the extravasated Blood; pent up long between the Muscles, which in this time had form'd for it self som Chambers. Yet in three days the contain'd Matter was all com away, the Leg fallen to its wonted Bigness, so that you might press every Part without any pain. All this while

while I never put in a Pledget, only squeez'd in the Solution, and spread the Pledget over, covering it with a clean Linen Rag, and the former retentive Bandage. During which time I used nothing but the said Solution to the discovered Bone, which were it a Caustic, what pretty work would it have made? Afterwards I dress'd him not above once in 5, 6 or 7 Days; he daily recover'd Strength, so that he rose, and by degrees walk'd with a Stick, the great Cavity being very fast, full of Flesh, the Bone hid; and by the 20th of *April* he was quite well. But this is remarkable, that in the beginning of the Cure by me, he took every day the Tincture in White-Wine or Claret, a Quart or three Pints a day, yet never was in the least feverish, tho at the same time he had no Stool for 11 Days, but always slept well, and gain'd Strength.

I mention nothing here to derogate from the former Surgeon, who every one will allow deserves well in sending for Assistance when he was put to a Nonplus.

ROBERT BAKER.

F

Experiment

Experiment III.

J *January 14, 1694, David Hunter, Waiter* at the *Roebuck Tavern* in Great *Suffolk-street*, in a Scuffle receiv'd a large Wound quite cross the *Carpus* or Wrist, in which the Artery was wounded, and two of the Tendons of the *Flexores Digitorum*, or Muscles which move the Fingers, quite divided. Their Extremities were seen by all By-standers. Within an hour after the Wound was given, I was sent for; it had bled much: but what with Napkins kept close on, together with the coagulated Blood, the great Flux was in some measure check'd. When I came in, I found a Dutch Physician there, who tho' I propos'd to stitch up the Wound, would by no means have it don; so I dress'd it only with the Medicins commonly used by us Surgeons, and bound it up: But at Midnight I was alarm'd, that he was bleeding to Death. I made all the haste I could to him; when I came, I found him fainting, and having great Convulsions. I found two Chamber-pots of Blood he had lost, before I could com to him, besides what was lost on the Ground, Sheets, &c. I presently put my Thum on the Artery, which beat and bled with that Violence, that it almost threw it off; and tho' I made several Applications of the best common Restringtons,

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I

I could not in the least stop the Flux; whereupon I sent for som of Dr. Colbatch's Pouder I had at my House, having forgot to take it with me. When it came, having no Water by me, I mix'd it with the White of an Eg, and with a Pledget of Lint applied it to the bleeding Artery, and another the whole length of the Wound, using only moderat Bandage just enough to keep on the Applications. In a moment the Flux of Blood was intirely stopt, and he slept well all Night; but the next Day he was a little in pain; so I took off the Roller, and just lifted up one of the Pledgets, from under which came away about half a Spoonful of extravasated Blood, which had bin pent up by the glutinous Quality of the White of the Eg. After the discharge of which he was presently at ease. I open'd it not again till 4 days after, at which time the same Dutch Physician, and two English Surgeons my Friends were by; when to the great Amazement of us all, the Artery was quite hid, the Extremities of the divided Tendons not to be seen, and the whole Wound incarned, so that only Cicatrization was wanting. In 15 days he was well, and had the use of his Hand as well as ever in his Life; and the Pouder was but twice applied,

ROBERT BAKER.

A
Phyfico-Medical
E S S A Y
CONCERNING
ALKALY and ACID,

S O F A R

As they relate to the Cause or Cure of
DISTEMPERS.

W H E R I N

Is endeavored to be prov'd, that *Acids* are not
(as is generally and erroneously suppos'd)
the Cause of all or most Distempers, but
that *Alkalies* are.

W I T H

An Account of som Distempers, and the Me-
dicins, with their Preparations, proper to
be us'd in the Cure of them.

A S A L S O

A Short Digression concerning *Specific Remedies*.

By J O H N C O L B A T C H, a *Member*
of the *College of Physicians*.

The Third Edition with som Additions.

L O N D O N,
Printed by J. D. for D. Brown, 1698.

To the Right Honorable

Sir HENRY BELLASIS,

Lieutenant-General of His
Majesty's Forces.

Honored Sir,

Dedications are now so much in fashion, that a Book which appears without one, is scarce look'd upon; People thinking the Author, who omits what is so generally practis'd, is altogether destitute of a Friend capable of protecting and countenancing him; for which reason only, let the merit of the Book be never so great, few will give themselves the trouble of reading more than the Title-page. To prevent which, and thankfully to acknowledg the manifold Favors you have generously confer'd upon me, I have presum'd to prefix your Name to this Essay. I can't flatter my self so far as to think any thing in it worthy to

entertain a Person of your parts : But since it comes from one fill'd with a sense of Gratitude, I have reason to hope it may meet a kind Acceptance ; well knowing that small things have sometimes a Value set upon them, especially when made the Offerings of Respect, Esteem, and Thankfulness. It would be too great an Honor to me to declare how readily you have appear'd to serve me when I stood most in need of your Assistance : For which I can't better express my Gratitude, than by a Silence full of Admiration ; and let me say never so much, I should fall short of my Duty. This Piece is properly Yours, it being under your Umbrage I was inabled to write it. And if, out of your wonted Generosity, you'll be pleased to cast a favorable Aspect upon it, it will afford the greatest Satisfaction to,

Honored S I R,

*Your most oblig'd
and obedient Servant,*

JOHN COLBATCH,

The PREFACE.

IT may be much wonder'd, that I should in the least presume to meddle with this Subject, which has already bin handled by so many Great Men. But when it shall be considered, in how different a manner I have treated upon it from what has bin hitherto don, I question not, but by the generality of Mankind I shall be very easily excused: And tho there may be many imperfections in it, yet when my Design (which is to undeceive people in a matter, on which depends the Health and Welfare of all) shall be well weigh'd, I doubt not but by the candidly Ingenuous it will be well approved; tho I expect to meet with a great number of Carpers, especially among those, who by long custom, and for want of due Consideration, have embraced a contrary Opinion.

It is scarce possible for a Man to converse with Persons that are ill, let the Distemper be what it will, especially such as have any smattering in Physic, which most now a days have, but they presently tell you, their Blood is so very acid, that unless the Acidity can be corrected, it is impossible for 'em to be well: And accordingly they fly to Alkalious Medicins, as Pouder of Pearl, Coral, Crabs eyes, or something of that nature: and if they send for a Physician, which few do, especially in Chronical Cases, till they have first used a vast Farrago of Alkalious Medicins, - and be
chances

chances to take the same Method with themselves, they presently cry out, We have already taken such vast quantities of the foresaid Medicins, that unless you can think of more generous and efficacious Alkalies, the Acids complain'd of will not be mortified. This has put men to great shifts, either to find out new, or to disguise the old ones: and after all, the Patients Expectation has bin frustrated, their Distempers not being to be cured by such Medicins; but on the contrary either exasperated, or so confirmed, that they will scarce admit of a Cure at all, especially if the Distemper be Chronical.

I must confess, I was formerly a Stickler for Alkalies (being carried away by the common Vogue of Mankind) and seeing the insufficiency of common ones, did put my self to great expence; besides a vast deal of trouble, to volatilize Salt of Tartar, &c. till at last I was fully satisfied, by daily observation, that Alkalies, tho never so exalted, would do me very little, if any service at all in the cure of most Distempers.

There are som particular Preparations of Steel and Antimony, of som of which I have given an account; which using as Alkalies, as they are generally believ'd to be, did me great service. But since I have well examined 'em, instead of Alkalies, I find 'em to be most noble Acids, and the Distempers cur'd by 'em did not (as I formerly supposed) proceed from an abundance of Acid Particles in the Blood or Juices;

ces; but on the contrary from Alkalious ones, as I suppose most Distempers do, and as I have endeavored to make appear by many Observations.

I expect many will cry out, as som have already don, That this Man was bred an Apothecary; and shall he pretend to be a Reformer in Physic and Surgery?

To which I answer, That I own my self to have bin an Apothecary, and bred up under a Man (tho otherwise very honest and just) that was not the greatest Master in his Business. Taking notice of his Imperfections, I applied my self for four Years of my time to diligent Study, in order to attain those things I was sensible he could not teach me. And after I had well considered, and in som measure becom a Master in Pharmacy, which is the Foundation on which the Practice of Physic is built, I was induced to look into the Body of Physic it self; and tho I don't pretend to absolute Mastership, yet I shall endeavor, and think my self obliged in Duty both to God and Man, to improve my small Talent to the best advantage I can, let Carpers say what they will.

The greatest part of my time I lived in Worcester; and tho I kept an Apothecaries Shop, yet my Dependence was wholly on my own Practice, the Success I had in which is sufficiently known in that Country. And for a Character, I desire noother than the generality of those People will give me, of whom I know no one that can or will speak amiss of me for any thing, but my coming
away

away from them, and leaving such flourishing thriving Business as scarce any of my Age ever had before; for which many of them have blamed me: but the Reasons of my leaving that Place are best known to my self; nay, are now in some measure evident to the World.

And since I have bin speaking of my being bred an Apothecary, I shall inlarge a little on that Subject, giving a short account of the necessary Qualifications of one of that Profession; and then leave every body to judg whether a Man so qualified has not made a large step towards being a good Physician.

First, An Apothecary must be well acquainted with the Vegetable Kingdom, not only to know the faces of Plants, but their Natures, and manner of Operation on Human Bodies: Can he otherwise tell how to handle them, so as to make his Compositions as they ought to be? And indeed every Physician supposes the Apothecary so qualified, when he prescribes to his Shop; for in his Bill he seldom directs the Method of making his Medicins, but only orders such and such Medicins, knowing, or at least supposing him (for every Physician ought to be well satisfied in the Abilities of his Apothecary) to be before hand skillfully prepar'd. For let a Physician prescribe like an Angel, if the Apothecary thro Ignorance be destitute of good and well prepared Medicins, both Physician and Patient are frustrated in their Expectations, which I am afraid too frequently happens.

Secondly,

Secondly, He must well understand the Nature and Operation of Minerals and Metals, which is not to be learnt in the Dispensatory, nor any other way to be attain'd, but by much reading, and hard labor in the Fire.

Thirdly, He must understand the Nature of Animal Bodies also, among which is comprehended that of Man, of whose Body there is scarce a Part, but is sometime or other to be used as Medicin: yet before it is used, the Apothecary's Skill is for the most part required for its Preparation, in order to which he ought first very well to understand its Nature.

With all the foresaid Qualifications, and many more, are multitudes of Apothecaries in England endow'd. And to the Honor of the Apothecaries of London be it spoken, I have generally found the meanest Shops in this eminent City better frayed with good Medicins, than the most eminent in all Holland, or the rest of the Low-Countries.

I might add much more on behalf of that noble Profession; which tho I have left off, yet still I have a high value for it, and think an honest and skilful Apothecary as serviceable in the Commonwealth, and to deserve as much Incongruement as any man whatever.

The Famous Etmuller was not asham'd to own, he serv'd 8 Years to an Apothecary; for all which he was afterwards one of the eminentest Physicians of Europe: And for ought I know, the loss of him at the Age he died, from whom so much might

might rationally have bin expected, deserves as much to be lamented, especially by Physicians, as the loss of any one privat Man.

And here let me lament the great misfortune under which the Commonwealth of Physic at this time labors, viz. the great Breach between Physicians and Apothecaries, or at least a great number of both Professions; which, unless som Method be found amicably to compose it, and to establish the antient Friendship and Correspondence between the two Professions, will be such an Opportunity to the Quacks, that in time they will destroy both Professions, and have liberty to injure Mankind without controul.

I believe there are more strowling Quacks in this Nation than in all Europe besides, who have nothing to recommend them but their Impudence; and the Common People who are not Judges, are easily imposed on by them; yea, 'tis daily seen that on the Ruin of Families many of them raise considerable Fortunes, and make a Figure in the World.

Now the only Method I can propose to suppress these Swarms of Caterpillars, is a hearty Union between the College of Physicians, and the Company of Apothecaries; for want of which Mankind daily suffers detriment.

I have not given a full account of those Distempers I treat of, but only som short hints so far as was necessary to clear my way.

In the following Essay there are Remarks on the Practice of som particular Men only, my De

sign not being in the least to reflect on that Noble Society, or any Member of them, I mean the College of Physicians, whom I own to be the Glory of our Nation, and of the whole World, and for whom I have the greatest Reverence and Respect imaginable. And since I had the Honor to be admitted into their number, and thereby of having more intimat converse with them, I see more cause to esteem and respect them every day.

I pretend not to be the sole Author, or first Broacher of this Doctrin of Acids in the cure of Distempers, it having long since bin the Opinion of som of the most happy Practitioners in the World, and is at this time imbraced by as great Men as perhaps our Age affords.

I wrote this Essay at a place (during the first three Weeks of the Siege of the Castle of Namur, when we had not many wounded Men brought to our Field-Hospital) where I had not the opportunity of consulting Books, nor the benefit of coming at my own Papers, wherin I had set down my Observations on this Subject: For want of which I have only us'd such as occur'd to Memory, wherby they are not so numerous nor exact as I design'd them: But however, for som reasons I am willing to venture them abroad as they are, they not being in the least designed to entertain the Learned, but to undeceive the Multitude.

I don't pretend to be so great, nor to deserve so well of Mankind as Helmont, Paracelsus, &c. yet they going out of the common Paths, and acting on different Principles from the rest of Mankind,

kind, did not want such as maligned them, and used allopprobrious Language against them. Therefore why should I, who have not in the least arrived to those great Perfections that they had, take it amiss to be abused and evil spoken of?

[I must confess I have differed from the fore-mentioned great Men in this, viz. that I have deliver'd my Mind in so clear a manner, that all might understand what I write; whereas they endeavored to conceal many great things even from their dearest Friends and Relations, whereby the World is now deprived of som Medicins that might have bin of great advantage to the diseased part of Mankind.]

Authority has in great measure blinded som Mens Understandings, and seal'd up their Eyes: There being still som that pay too submissive a Deference to antient Opinions, tho never so contrary to Reason, and will not open their Eyes to see the Truth. There are still Men who write against most known Truths, as the Gravity and Elastic force of the Air, and other such things. This Doctrin of Acids, and that I formerly wrote concerning the Cure of Wounds, are likewise of the number of those that are unfortunate, merely for not being born old, and with a venerable Beard.

When a Book (says the famous Malbranch) is first to appear in the World, we know not whom to consult to know its Destiny: The Stars preside not over its Nativity; their Influences have no operation on it, and the most confident Astrologers

logers dare not foretel the divers Risks of Fortune it must run. Truth not being of this World, Celestial Bodies have no power over it; and wheras it is of a spiritual Nature, the several Positions or Combinations of Matter can contribute nothing either to its Establishment or Ruin. Besides, Mens Judgments are so different in respect of the same things, that we can never more hazardously and imprudently play the Prophet, than in presaging the happy or unfortunate Success of a Book. So that he who ventures to be an Author, lays himself at the Reader's Mercy, to make him what he pleases. But of all Authors, those who encounter with Prejudices, ought infallibly to reckon upon their Condemnation. Their Works sit too uneasy upon most mens Minds; and if they escape the Passions of their Enemies (which I have not) they are obliged to the almighty force of Truth for their protection.

However, time will do every man Justice; and Truth, which at first appeared a chimerical and ridiculous Phantasm, by degrees grows sensible and manifest. Men open their Eyes, and contemplate it; they discover its Charms, and fall in love with it.

The Books that encounter with Prejudices, leading to Truths thro unbeaten Paths, require a longer time than others to obtain the Reputation their Authors expect. And I find it too true, that all those Writers who combat with Prejudices, are much mistaken, if they think thereby to recommend themselves to the Favor and Esteem of others.

G

Possibly

Possibly a few will speak honorably of them when dead. But while living, they must expect to be neglected (I speak experimentally) by most people, and despised, reviled, and persecuted even by such as go for the wisest and most moderate men. There is nothing but Truth contain'd in my *Novum Lumen Chirurgicum*; and I thought I should have bin in a condition this Summer to have made it evidently appear. But instead of that, I have bin abused and delivered up into the hands of my Enemies, to do with me as they pleas'd.

My *Novum Lumen* is built on a pair of Medicins, which as yet I think not fit to make public; but here lies my misfortune common to all those who make new Discoveries: A great many believe the truth of what I have said, and that my Medicins are capable of performing what I have promised. But among those who are so ingenuous as to believe matter of Fact, many say, this Man was not the Author; others, that they have the same Medicins; and some, that they imparted them to me. As for these Gentlemen, I can easily excuse them, well knowing it is the nature of most Men not to allow any Person the honor of his own Discoveries, thinking thereby their own Glory eclipsed. But there are another sort, whose Interest will not let them embrace the Truth, and for that reason do what in them lies to keep others from so doing. And the greatest part of Mankind not being Judges in my Cause any further than their Eyes direct them, it is altogether impossible there should be many Spectators, by which means

means I am evil spoken of by many, because an interested Party has told them I have pretended to what I can't perform.

I expect the Mouths of my Enemies will be opened wide against me; but I have already born so much, that I can contentedly suffer the greatest Indignities that may be offer'd: My great Satisfaction being that I have Peace in my own Mind, having propos'd nothing but what tended to the good of Mankind; and well knowing, that if my Medicins are faithfully and skilfully used, they are capable of performing much more than I have promised for them; but the best Medicins unskilfully used, or by prejudiced Persons, with a design they should not succeed, may be brought into disgrace.

The following Essay I humbly offer to the candid Reader's Consideration, not doubting it will meet with a favorable reception. I must needs say, I more value the good Word and Opinion of one candidly ingenuous, than all that can be said by ten thousand clamorous, ill natur'd Persons. I have endeavored to act so, as to deserve no Man's ill Word; but if I am abused, and my Undertakings misrepresented without just cause, I shall never break my Heart about it, being assur'd the Justice and Integrity of my Undertakings will one time or other appear.

There being a great Call for this little Tract, and the former Impressions being quite sold off, at the request of my Bookseller I have suffered this third Edition to com abroad: The Additions I

have made are not many, tho I could have added much more; but the Bookseller designing to print this and som other Tracts together, if I should have added much, it would have swelled to a larger Extent than is designed.

Were I satisfied that any one thing I have advanced either in this, or my other Tracts, did in the least tend to the prejudice of Mankind, the first thing I went about should be to recant, and beg pardon of the World: but instead of that, I am daily more satisfied and confirmed in the truth of my Hypothesis, both by the Success attending my own Practice, and the concurrent Testimony of Multitudes of Practitioners from most parts of England, who have bin so generous as to return me Thanks for making them sensible of their Errors, and setting them on a right Bottom, wherby they are capable of acting with som Certainty, which before they could not do: For whose sake, tho I meet with never so much Opposition from others, I will spare no pains to make things yet more clear.

From my House in Villers-
street, York Buildings.

A

Phyfico-Medical

E S S A Y, &c.

C H A P. I.

Of the Small Pox.

THE first thing I shall begin with, is the Difuse of *Alkalies* in the *Small-Pox*, that fatal Distemper to three Kingdoms, and even all *Europe*; in that God was pleased therby to deprive us of a Princess, whose Worth was such, that a sufficient Value can never be set upon it, nor her Loss be enough lamented.

It is common both with Nurses and the generality of Practitioners, as soon as they perceive the least Symtoms of this Distemper, to give *Gascoin's*, *Countess of Kent's*, *Lapis de Goa*, or som other *Testaceous* Pouder, which are known *Alkalies*. The one Party pretend therby to drive the Malignity from the Heart; the other to correct the Acidity which they conjecture (beyond which they can't go) to be in the Blood.

In the subsequent Discourse, I shall endeavor to shew on what false Suppositions both Parties go.

For the first sort it will not be worth while to spend much time, because every one will readily grant, they generally act on wrong and mistaken Notions. And as for any Malignity lodg'd in the Heart more than in any other part, 'tis altogether impossible, by reason the Blood moves ten times at least faster thro the Heart than any other part, the Lungs excepted : And the Cavities being large, no *Stagnation* is to be feared, and consequently no danger. If there be any fear of the Malignity's settling any where, it must be in those parts where the Vessels are very small, and the Blood moves but slowly, which must be near the extreme Parts.

For the second sort, who give the same Medicins, but with quite different Intentions ; I shall endeavor to prove, that their Suppositions are altogether as groundless as the former. They give their *Alkalious* Medicins to correct the *Acidity* they suppose to be in the Blood, which is, as they pretend, the occasion of all the ill Symtoms that attend the Small-Pox. Now I could never hear of any one, that by analyzing the Blood of Persons in the Small-Pox, could ever find the least Footsteps of *Acidity* in it ; tho, on the contrary, it appears after many Trials, that the Blood of such abounds more with *Alkalious* Particles than that

of sound People: and consequently, the giving Alkalies in this case must be at least superfluous, if not highly pernicious, as I have frequently observ'd, and shall instance in some Particulars.

The cause of the Small-Pox, common with most other Fevers and acute Distempers, I suppose to be from a quantity of such Particles being some way or other admitted into the Blood, which being of a quite different Texture from the Blood, and so not capable of mixing with it, cause a hurry and disorder there; which is what I * elsewhere observe to be the occasion of both continued and Symtomatic Fevers. Now it is well known a Fever always precedes the Eruption of the Pustles in the Small-Pox: And when the Pustles are well come out, that is, when the heterogeneous Particles, or such as are of a different Texture from those of the Blood, are thrown out to the Surface of the Body, the Fever ceases.

**Nov. Lum.
Chir.*

Now to assist Nature in throwing those heterogeneous Particles out of the Blood to the extreme Parts, which they pretend to be mightily hinder'd by a great quantity of Acids in the Blood, they give repeated and large quantities of Testaceous Alkalious Pouders, and other *Diaphoretics*; which indeed seldom fail of answering their Intentions, in throwing out large quantities of Pustles, even more than Nature is able to supply or bring to maturity;

and if the chances to cope with 'em, 'tis the only occasion of spoiling so many Angelic Faces, as we daily observe. But the spoiling of Faces is not all, for besides the throwing out so great a quantity of Pustles by breaking the Globules of the Blood, when brought to the *Cutaneous* Glands, instead of those Glands separating the excrementitious *Serum*, which in a state of Health is all or most part of it carried off by Sweat, or insensible Transpiration, but at this time to supply the Pustles till brought to maturity; I say, by breaking the Globules of the Blood when in its confused state, *Serum* and all together, the excrementitious *Serum* only, according to the Rules of Nature, ought to be separated, those Glands being so many Strainers fitted to receive into them the *Serum* only, and not the least drop of Blood when in its natural State, and its Globules unbroken. I can liken the separation of the *Serum* from the Blood, by the mediation of the cutaneous Glands, to nothing better than a Mixture of Oil and Water, made by continued agitation, when that compound Mixture seems to be one intire white Liquor; tho with good Eyes or a good Glass, the Oil may be seen floating in the Water in small Globules, as the Blood doth in the *Serum*, as I elsewhere * observe:

* *Nov. Lum.*

Yet this Mixture of Oil and Water, let it be don never so exactly, if pour'd into a Funnel lined with brown Paper, wet beforehand, the Pores will be so disposed, as to let

*

all

all the Water run thro, tho not the least Particle of the Oil; yet if there be som Alkalious Salts boil'd with this Mixture of Oil and Water, the Globules of the Oil will be so broken, as to pass readily with the Water thro the brown Paper, which before it would not in the least. In like manner, the Globules of the Blood being broken by the means of Alkalious Medicins, together with too great a quantity of Alkalious Particles being before admitted into, or rather detained in it, are thereby made capable of being received into the cutaneous Glands, which is the only occasion of those purple Spots on the surface of the Skin, not only in the Small-Pox, but other Fevers; which Spots seldom or never fail of being the certain tokens of future Death.

But this is not all, for by the said breaking the Globules of the Blood by Alkalious Medicins, these small broken Globules getting into the little Meanders of the Brain, hinder the Motion of the Animal Spirits thro the Nerves, and so cause Deliriums, and all those fatal Disorders of the Brain too frequently seen.

Likewise the Blood, which is not capable of being contained in its proper Channels, is the occasion of violent Bleeding at the Nose, bloody Urin, &c. which are none of the best Symtoms, but what too often happen by the said means.

Besides breaking the Globules of the Blood, and causing the foresaid ill Symtoms, with
many

many others I don't think fit to enumerat; by their Diaphoretic Quality there is so great a waste made of the Serum of the Blood, that there is not a sufficient quantity left to supply and bring to maturity those many Pustles (even more than Nature designed) that these Medicins alone had thrown out: So that about the ninth, eleventh, or thirteenth day, for want of a sufficient quantity of Serum to supply them, the Pustles fall, and the acrid corrosive Matter being absorbed into the Blood, causes secondary Fevers, which oftentimes prove very dangerous. I might expatiate much more, but I design brevity.

It may be said I have gon far enough in condemning the ordinary Practice as to the use of Alkalies and Diaphoretics, not having substituted a better and safer Method and Medicins in their room: but not too fast, that follows in its proper place.

The Small-Pox is a Distemper that requires the giving of as few Medicins as any Distemper whatever, unless in som extraordinary Cases; but yet I think it most unreasonable, that People (as is the common practice) should be left to the sole management of old Women and Nurses; which alone I verily believe has destroy'd more than the Sword it self. And tho but a few Medicins, as I said before, are generally necessary, yet the Ey of a careful, skilful Physician, and that from the beginning, is as convenient as in any Distemper
what-

whatever, that seeing Nature's Operations, he may also observe the fit time to give the Medicins requisit. I confess I have heard som complain that such a Physician has had so many Fees, and never wrote one Bill for them. For such People, let me tell them, they complain without cause: for in many cases, especially in this, the Physician deserves his Fees better for not writing at all, than otherwise.

I own my self a profess'd Chymist, and in many things, tho not all, a Disciple of *Helmont*, and know nothing so delightful to me, as Chymical Operations: Yet in this case, nor indeed scarce in any acute Distemper, do I judg Chymical Medicins, at least the elaborate ones, to be absolutely necessary, tho many of them may do well, and are sometimes to be used: But I know no reason to fly to elaborate Preparations, when Nature has provided Medicins ready to our hands. Acids skilfully and timely given, I have seen, not only by my own, but by several Great Mens Practice, to be the only safe, effectual, and seldom or never erring Medicins in this Distemper; and why should we fly to Acids chymically prepared, when, as I said before, Nature has provided Oranges, Lemons, Citrons, Limes, and a great many more not necessary to mention, which for the most part answer our intentions, if skilfully given by an experienced hand? And as I hope I have shewn sufficient

ent Reasons to dissuade from the use of *Alkalies* and *Diaphoretics*, from the many direful effects that daily attend their use; so I hope to give as cogent ones to inforce the use of *Acids*, from the laudable, good effects I have seen from them: for in at least five hundred Patients that I have had of all Qualities to do with in this Distemper, in *Worcester* and *London*, to the Year 1695, when called in at the beginning of the Distemper, I know not that I have had one that has died, or bin disfigur'd; nay som that were brought into very ill circumstances by the use of Testaceous, Alkalious Pouders and Diaphoretics, I have retriev'd from the jaws of impending Death by fit and proper *Acids*.

[And in the Small-Pox that has raged during this present Year 98, I have not lost above three Patients, and the occasion of their Deaths, as I have all the reason in the World to believe, proceeded from Irregularities committed by their Friends before I was called in, *viz.* their giving them sweating Medicins upon their first being taken ill, which I earnestly caution all People against, as a thing that frequently proves fatal, as it also dos during the whole Course of the Distemper. But further, why should Diaphoretics be given at first to hasten the eruption of the Pustles, when it is evident to all cautious, observing Practitioners, that the only dangerous Small Pox is that where the Pustles appear within a day or two
after

after the Patient is taken ill; whereas those that are four, five or six days before they appear, are generally free from all ill Symtoms? Therefore if we would imitate Nature in her regular operations, we should rather moderate, than rashly push forward the eruption of the Pustles.]

It may be wonder'd at that I make a difference between *Testaceous* Pouders and *Diaphoretics*, when the Testaceous, especially the compound ones, as *Gascoin's*, *Countess of Kent's*, *Lapis de Goa*, &c. are accounted Diaphoretics, and indeed are so: but my reason is, because for the most part, besides the said Alkalious Pouders, other more forcible Diaphoretics are also given.

Having in short given som hints concerning the cause of the Small-Pox, I need not again repeat them, but shall immediatly proceed to the method I take in the cure of it, which being according to Nature's dictates, is short and easy: For Nature in performing her Operations makes short and easy cuts; it being in the cure of Diseases, as in finding out and giving an account of the *Phenomena* of Nature by Philosophical Disquisitions, they that go upon the fewest Principles, generally discover most of her Secrets, and are capable of giving the best and most rational account of them; whereas they that are clog'd with multiplicity of Principles, and wander in tedious and uncouth Paths, thinking thereby to get admission
into

into Nature's Cabinet, after they have spent much time, and taken a great deal of pains, at last sit down as wise as when they began, and not one jot wiser.

First, when I com to a Patient who has the Symtoms of the Small-Pox, which are so well known even to Nurses, that I need not spend any time about them: In the first place, if there be any manifest signs of the Stomach's being oppress'd and clog'd with viscus Matter, as generally it is, I give a gentle, easy Vomit, suitable to the age and constitution of the Patient; and after that has don operating, som *Syrupus à Meconio*, or any other proper Opiat in due proportion. Afterwards, to allay the disorder in the Blood, occasioned by the intromission of Heterogeneous Particles, which Nature endeavors to throw out; and to confirm the Texture of the Blood, so as to inable it to rid it self of its Enemy, I give large quantities of any of the following Juleps.

℞ *Succi Aurantior. Unc. sex,*
Aq. Hordei lib. duas,
Sacchari Albi q. s. ad gratam saporem.
M. f. Julap. Vel

℞ *Succi Limon. Unc. quatuor,*
Aq. Hordei lb duas.
Cinnamomi Fortis Unc. semis,
Syr. E Rubo Ideo Unc. tres.
M. f. Julap. Vel

℞ *Aq. font.* ℥ *unam semis,*
Vini Rub. ℥ *semis,*
Syr. E Rubo Ideo ℥ *iii.*

M. f. Julap. Vel

℞ *Aq. Cinnamomi Hord.* ℥ *ii.*
Succi Limon. Unc. quatuor,
Syrup. de Succo Lujulae Unc. tres.

M. f. Julap.

Of any of these Juleps I let my Patients drink as oft and as freely as they will; drinking likewise small Beer with Juice of Oranges in it, in as large quantities as they please: But during the whole course of the Distemper, all sorts of Flesh ought to be avoided.

To poor people, instead of the said Juleps, and to save charges, I order large quantities of small Beer, acidulated with Oil of Vitriol, or else Vinegar, or Verjuice Posset-drink, to be drank frequently, and in large quantities.

But if in the beginning, or afterwards, the Brain be much disturbed, and the Patient delirious, for the most part I find it absolutely necessary to let Blood, and that in a good quantity; and then to use more powerful Acids, giving the following Juleps in large quantities; which presently calm the violent Motion and Agitation of the Blood and Spirits, and set all to rights in a small time.

℞ *Aq. Cinnamomi* Hord. ℥ unam,
Syrup. de Rubo Ideo Unc. unam sem.
Sp. Vitrioli Volat. Drach. sem.
M. f. Julap. Vel

Delir. Anim.
or sinking
of spirits
 ℞ *Aq. Cinnamomi* Hord. ℥ unam,
Syr. de Rubo Ideo Unc. unam sem.
Gas Sulphuris q. s. ad acidum Saporem.
M. f. Julap. Vel

℞ *Aq. Hordei* ℥ duas,
Epidem. Unc. duas,
Syr. Lujule Unc. tres,
Sp. Nitri, vel Vitrioli Dul. scrupulos duos.
M. f. Julap. Vel

℞ *Flor. Rosarum Rub.* Drac. sex,
Aq. Fontan. Bullientis ℥ duas,
stent in infusione in Vase vitreo clauso per
quadrantem horæ, postea affunde Ol. Vi-
trioli vel Sulphuris per Campan. Scrupulos
 duos: *macerantur per alterum quadrantem*
horæ, & coletur, colaturæ claræ adde
Sacchari albissimi q. s. ad gratum sapo-
rem.

In all the Liquor they drink, I order a few drops of *Spiritus Nitri*, or *Oleum Vitrioli dul.*

If I find my Patient's Spirits languid and low, I give 3 or 4 spoonfuls of the following Cordial at due intervals, especially towards the

the end of the Distemper, when Cordials are most wanted.

℞ *Aq. Mirabilis,*
Epidem. ana Unc. tres.
Spirit. Citri Unc. sem.
Aq. Melissæ Unc. octo.
Syr. Garrioph. Unc. unam sem.
M. f. Julap. Cardiacum.

[Where there are any Symtoms of what is commonly called *Malignity*, I give either of the following Medicins during the whole course of the Distemper.

℞ *Rad. Angelica Hispan. ℥ i.*
Fol. Ruta,
Scordii ana M. ℥.
Vini albi,
Aceti Acerrimi ana Unc. sex.
Infunde clause & calide in Vase vitreo vel ter-
reo per horas tres, & coletur, colaturæ cap. Coch-
learia sex quartâ vel sextâ quâq; horâ. Vel

℞ *Aq. Theriacalis Unc. quatuor vel sex,*
Aq. Ruta Unc. sex,
Syr. Lujula Unc. unam.
M. f. mixtura in quatuor partes æquales distrib.
quarum cap. unam quartâ vel sextâ quâq; horâ.

They may also take 10 or 15 drops of my
 Elixir of *Vitriol* three or four times a day in
 any convenient Vehicle. H If

*Long Royal
Gills & Her
Conferve
mist*
If they are subject to be loose, I give the quantity of a Nutmeg of Conserve of Sloes, a little aromatized with Oil of Cinnamon, once in two or three hours, ordering them to drink afterwards a Draught of Tincture of Roses.

By this Method I have brought my Patients thro the Distemper, without scarce so much as any uneasiness, or being confin'd to their Beds, or the least fear of a secondary Fever, which frequently proves most fatal.

After the Pustles are quite gon, I take care to purge 'em well five or six times with gentle and easy Purges, after each Purge giving a *Hypnotic*. After I have don Purging, for some time I give corroborating, strengthening Medicins, to confirm the Texture of the Blood and Juices, and bring them to their natural State, wherby I prevent accidents, that somtimes succeed the Small.

I have not given the History of this Distemper, that being contrary to my design, but endeavored to deter People from the use of such Methods and Medicins as have prov'd fatal to many, and to advance a better and safer Method in their room; yet I would not have people wholly rely on the Method here set down, but always have a Physician by to obviate any unusual Symtoms that may appear contrary to what generally dos; and where Life lies at stake, people can't be too cautious: But if the good old Women and Nurfes, in spite of all

that

that can be said, will be still tampering, I must needs say, if my Method be exactly follow'd, I verily believe there would not one in ten die that have formerly by the use of *Alkalies* and *Diaphoretics*.

As I have before exploded the use of *Alkalies*, and given my Reasons for it; so I shall now give som Reasons for the Method I take with the great use of *Acids* in this case.

I judg the cause of the Small-Pox, as I before observ'd, to be from an intromission of Heterogeneous, or Particles of a different Nature and Texture from the Blood, into it; wherby it is put into a great hurry and disorder, in order to throw off its enemy; and that the place, by which Nature designs the discharge of these Particles, is the cutaneous Glands. Now the Inconveniencies I observ'd to attend the use of *Alkalies*, were the throwing out of more Pustles than Nature intended, the destroying of the Globules of the Blood, and a waste of too great a quantity of Serum. I before forgot to mention one dismal effect of *Alkalies* and *Diaphoretics*, viz. that by destroying or breaking the Globules of the Blood, instead of regular Pustles being thrown out to the Surface of the Skin, the divided broken Globules are together with the morbid matter thrown out, as in the — and so causes an *Erisipelas* or *St. Anthony's Fire*, which seldom or never fails of proving fatal.

Now I defy any one to say he ever observed such Symtoms as these, when Acids were us'd from the beginning, which are of that nature as to confirm the Texture of the Blood, which is that red substance wherein is contain'd the

**Nov. Lum.*
Chir.

Byolycnium * or Lamp of Life; and by so doing Nature is capable of throwing out the extraneous Particles in a sutable way, without the inconveniences that attend the other Method: For the Texture of the Blood being confirm'd, and moving regularly and naturally in its proper Channels, the morbidic Particles are only thrown out, and such a quantity of Serum left as is sufficient to supply the Pusles, and bring them to maturity without any fear of their flatning, or the acrid Matter being again absorb'd into the Blood, and causing secundary Fevers. Besides, the Globules of the Blood being kept together unbroken, there is no danger of their being extravasated, and causing the fatal *Purple Spots*; nor of being thrown out together with the morbidic Matter, and so causing an *Erisipelas* or St. *Anthony's Fire*; neither are *Hemorrhagies*, at the Nose, bloody Water, &c. in the least to be feared; nor, by being admitted into the small Meanders of the Brain, to cause Deliriums, and those other Symtoms that attend it.

I might expatiate on continued Fevers, and other acute Distempers; but that would be to be guilty of Tautology: For I assign but one
general

general Cause of 'em, tho I own the extraneous Particles causing 'em may be somewhat various; and according to the different size of the extraneous Particles, the parts affected may be different; as in the Small-Pox, the size of the Particles are such as to fit them to be thrown out by the cutaneous Glands to the surface of the Skin; in other Fevers they are thrown out, sometimes one way, sometimes another, according to their size. For instance, sometimes they are thrown out by critical Sweating, sometimes by Urin, sometimes by the Glands of the Mouth in spitting, and so on, according to the different disposition of the Particles causing the Distemper, which are fitted to be discharg'd thro the Pores of different Parts; and whatever way we find Nature inclin'd to act, we must assist her in it, but not spur her on, unless she be too sluggish, nor on any account whatever hinder or thwart her in her Operations.

In most continued Fevers we have found Alkalies as pernicious as in the Small-Pox, and Acids as advantageous; of which I shall give an instance or two.

After I came from *Flanders* in 1694, having discours'd with a certain Physician about a Fever that raged that Summer in *London*, and of which many died; he told me, when he found his Patients under such and such Circumstances, he as much gave them up for dead, as if a Dagger were run thro their Hearts. I

ask'd him what those Symtoms were, that render'd his Patients circumstances to be so dangerous? He replied, When he found them delirious; and had Spasms and Convulsions of the Nerves. I inquir'd of him, what Medicins he gave? He told me, a Composition of *Gascoin's* Pouder, *Virginian Snake-Root*, &c. which he solely relied on, and is the same, or of the like nature with what is generally given. I ask'd him, whether he had never found his Medicin serviceable to him? He ingenuously confest, when his Patients were under those Circumstances, it never did him any service. I again ask'd him, why he did not vary his Method? His Reply was, his Medicin was a most noble *Alkaly* and *Alexipharmic*, and what was generally us'd, and therefore he did not think fit to vary from an establish'd Method.

A few days after I was called in to a Gentlewoman exactly under the same Circumstances before related; she was delirious to the highest degree, had violent Spasms and Convulsions of the Nerves, and all other Symtoms of a Malignant Fever. I despair'd not of her Life; and by the plentiful use of proper Acids, all Symtoms soon vanish'd, and in a week she was fit to go abroad.

Besides, I could instance in a hundred Cases of the same nature, but that I design brevity.

I must own other Distempers may be complicated with the Small-Pox, and other continued Fevers and acute Distempers; or from a different Constitution of the Air, &c. unusual Symtoms may appear; in which cases a general Method must not be relied on, but recourse must be had to proper Specifics.

I have so little reason to recant what I have said concerning the Cure of the Small-Pox and Fevers by Acids, that every day's experience confirms me in the truth of it: and were it not that I design a particular Tract of Fevers, I could expatiate here largely concerning the reasonableness of my Proceedings.

C H A P. II.

Of the Scurvy.

I Now com to treat of the disuse of *Alkalies* in the *Scurvy*, that reigning Distemper, from which few are altogether free; and is by most accounted incurable, or at least for the most part proves so.

But here I expect the cry of all Mankind against me; What! say there is no Acidity in the Blood in the *Scurvy*? What but an Acidity in the Blood causes the breaking out of Scabs, Pimples, Blotches. &c. on the Skin? What but a Sharpness in the Blood occasions those

dring Pains, and a thousand other Symtoms of which people laboring under this Distemper complain?

My Friends, have patience, and I will presently make it appear, that those Symtoms are not occasion'd by *Acids*, but by *Acrid, Lixivious, Alkalious* Particles; which I doubt not to evince by plain matter of fact.

First of all, by a Chymical *Analysis* it appears that the Blood of *Scorbutic* Persons has a far greater quantity of Volatile Alkalious Particles, than that of sound Persons; together with som quantity more or less of a Lixivious, fixt Alkaly, of which, for as much as ever I could find, the Blood of sound Persons is altogether destitute.

And by the way let me add this: If Physicians would chymically analyze the Blood of Persons in all Distempers, and make nice Observations of the different substances obtained from it, the cause of Distempers would be clearly known, and by consequence the cure of them much more certain than now it is. But that I may return to my business.

Another considerable Argument, besides that beforementioned, to prove the Scurvy has its rise from Alkalious Substances in the Blood, and not from Acids, is this which follows.

I have bin frequently told by som Seamen and Surgeons, that have had long Voyages at Sea, especially towards *China* and the *Indies*,
* that

that of a hundred Men in a Ship, not two of them but have bin almost eaten up with the Scurvy, their Skin squalid and full of Blotches, their Gums eaten away, and their Teeth ready to drop out, Pains and Aches all over their Bodies, &c. and yet on their landing at Cadiz, or therabouts, where is plenty of Oranges and Lemons, and eating large quantities of them, in one fortnight's time at farthest scarce one has fail'd of being perfectly cur'd. This is not a Relation of one or two Persons only, but what is generally agreed upon, and allowed by all to be Truth.

Tho these moderat Acids plentifully used may have such effects in that hot Country, yet I have not observ'd that in our cold Climat they have always, always I say, the same effect : because in slight cases they generally do well ; yet in more stubborn ones we are forc'd to have recourse to more powerful penetrating ones.

As for Alkalies, I don't believe ever any one was cur'd by 'em of this Distemper ; tho I have known som that have taken a vast *Farrago* of Testaceous Pouders, &c. without any good effect, which afterwards has bin don in a little time with a small quantity of proper Acids.

Before I conclude, I shall insert a Preparation of *Antimony*, which I have found of extraordinary use in the most inveterat Scurvies.

Tinctura

Tinctura Antimonii.

℞ *Flor. Albor. Antimonii unc. octo, Spiritus Tartari volatilis ℥ duas, ponantur in Phiolâ vitreâ forti cum Collo oblongo; simul misceantur, & optimè agitantur; postea digerantur leni Calore Balnei per dies quatuordecem, tunc decanta Spiritum rubro colore tinctum a Floribus. Spiritus verò tinctus, e Cucurbitâ vitreâ per Alembicum abstrahendus a Tincturâ, usq; ad medietatem cum igne lenissimo; Tinctura remanens, reservetur in Phiolâ cum obturatorio vitreo optimè clausâ. Spiritus, distillatione abstractus, potest iterum usurpari in eodem negotio.*

Spiritus Tartari volatilis Præparatio.

℞ *Tartari Rhenani purissimi ℥ viginti, colloca in Cucurbitâ ferreâ, cui adaptatur Alembicum aut ferreum aut cupreum; collo Alembici potest applicari Serpens stanneus aut cupreus, collocatus in Dolio quâ frigidâ repleto: Tinctura ubivis locorum ritè rectèq; sint munita cum optimo Luto; quando Lutum optimè siccatur, tunc distilla, primò igne lento, postea fortissimo, & continuatur donec nihil amplius elici potest. Spiritus prædictus, ab oleo fatido liberatus, potest misceri cum*

cum libris tribus Capitis Mortui ad albedinem calcinati, & ad medietatem usque, in Balneo Maria abstrahere è Cucurbitâ vitreâ per alembicum, quorum junctura sint ritè munita, & suum retinebit calcinatus Tartarus Fetorem una cum Phlegmate, stillante Spiritus parte solummodo puriore & subtiliore; qui denique cum 1b duabus Capitis Mortui calcinati miscendus, & per Alembicum recentem rectificandus. Atque hic est Spiritus ille Tartari, cum quo prædicta extrahitur Tinctura, & quidem non solum hac, sed etiam cunctorum Metallorum aliorum, id quod nullus præstare potest alius.

Of the aforesaid Tincture I use to give about four, six, eight or ten Drops, according to the age and strength of my Patients, Morning and Evening, in about half a pint of strong Infusion or Decoction of Juniper Berries, without any precedent Purgation; this Medicin performing that Office where there is occasion: it answers every thing generally said of a true Panacea, sometimes working by Vomit, sometimes by Stool, and sometimes by Urin, but mostly by a gentle Diaphoresis or Sweating. I once knew it to cause a Salivation, without any of the ill Symtoms that usually attend it, when rais'd by Mercurial Medicins. Whoever has a mind to see more of this Tincture, may read *Glauber Op. Mineral. Par. Prim.* from whom

whom I had it, tho I vary something from him. I have found it of great use, not only in the Scurvy, but many other Chronical Distempers, as Rheumatisms, Sciaticas, Dropsies, &c. and by some few Observations I have made, I believe it may do great things even in the Gout it self.

That I may excite People to the use of this noble Medicin, I shall presume to transcribe what *Glauber* declares of it, who I believe has said no more than it deserves.

‘ This noble Tincture of *Antimony* (says
 ‘ he) above all other Medicins, dos wonder-
 ‘ fully evacuate all vitious Humors, and insen-
 ‘ sibly purify the impure Blood; it opens
 ‘ all Obstructions of the Liver, Spleen, Kid-
 ‘ neys, and all the other *Viscera* of a human
 ‘ Body, drawing from them all Malignity,
 ‘ leaving no Impurities there. And because it
 ‘ purifies the Blood, it cures the Leprosy,
 ‘ the French Pox, the Scurvy, and all other
 ‘ Diseases proceeding from the Impurity of the
 ‘ Blood. By its penetrative and attenuating
 ‘ Virtue it resolves all Tartarous Humors, and
 ‘ evacuates those that generat the Gout, and
 ‘ the Stone in the Kidneys and Bladder.
 ‘ But it dissolves not *Tartar* perfectly coagulat-
 ‘ ed, but only mitigates the pain proceeding
 ‘ from it, and hinders its increase; to wit, at-
 ‘ tracting and evacuating from all the *Viscera*
 ‘ both radically and fundamentally that which
 ‘ is not perfectly indurated and coagulated. It
 ‘ takes

takes away all Fevers, and other Distempers proceeding from a superfluity of Humors. It sweetly evacuates Water contain'd between the Skin both by Urin and Stool. In short, it strengthens and purges the principal Parts, and preserves them from all preternatural Accidents. It is the best Preservative in time of the Plague, and all other contagious Distempers; and to those that are taken with any of them, a most excellent curative Remedy, driving out and evacuating the Malignity. In a few words, it is a universal, and even the best of all Medicins, being most profitable both for Young and Old, as it is also the most safe; but yet with caution to be administer'd, by reason of the most potent Qualities with which it is endow'd, it being as it were a greater Fire extinguishing or swallowing up a lesser. A better Medicin than this certainly cannot be desir'd, which is got out of a mean Subject in a short time, and with very little charge. I ingenuously confess I never saw the like, and I doubt not but it is one of the best of Medicins. Thus far *Glauber* himself, with a great deal more worth any Man's reading: *Vid. Op. Mineral. part. I. p. 35, 36, &c.*

[I confess since I have left off the preparing my own Medicins, I could never get this Tincture so made as in any measure to answer my intentions: nay since I have by large experience found the extraordinary use of *Cremor Tartar*,

tar, and highly acidulated *Tartarum Vitriolatum* in these cases I have not bin over anxious about it, it being a Medicin of difficult preparation, and the others easily to be procured at all times, and in all places.]

In *Scorbutes* attended with Pains, I have frequently known the following Tincture of admirable use, as I have also don in some sort of Gouts, in my Tract of which Distemper I have made mention of it.

℞ *Gum. Guaiaci pul. unc. duas,*
Succi Liquiritia Hispan. in ten. taleola
incis. unc. quatuor.
Sp. Vini rect. ℥ unam.

Infunde clausè & calidè per duos dies, postea decantetur Tinct. clara.

The Dose of this Tincture is a Spoonfull Morning and Evening, either in a Glass of warm Ale, or the following Infusion,

℞ *Rad. Eringii unc. unam*
Lig. Sassafras Dracm. sex
Vini Rhenani ℥ unam
Aq. Font. ℥ unam sem.

Infunde clausè & calidè per horas quatuor, & decantetur, colatura reservetur ad usum.

In Scorbutical Cases I have also found *Cremor Tartar* and *Tartarum Vitriolatum*, taken for a considerable time, to be of extraordinary

ry use. And I verily believe if *Cremor Tartar* alone was given in large quantities to our Seamen who go long Voyages, it would in a great measure, if not altogether, prevent the many Inconveniencies that attend them by their Scorbutic Habits, which frequently so afflict them, that they are made altogether incapable of doing their Business. Nay, I believe it would also prevent *Calentures*, and other fatal Distempers that destroy so many of our Men, either in long *East* or *West-India* Voyages; and by its cheapness it seems rather adapted for the Necessities of the Poor, than of the Rich. But tho it be cheap, yet if we consider but the Nobleness of its Extract, that alone is sufficient to set a Value upon it: For what is it but the essential Salt of the most noble of all vegetable Productions, viz. the Juice of the Grape, that which rejoices the Heart of Man, and makes the Peasant equal with his Lord, and the afflicted Man forget his Misery? As for my self I had rather be without a great part of the *Materia Medica*, than *Cremor Tartar*; for considering it as a simple Remedy, it is of the most universal extent of any thing I know. Without doubt it is the finest *Purge* in Nature given in a due quantity, it performing that Office without any griping or uneasiness; and in a less quantity is a most noble Alterative, it strengthening the Stomach, and helping Digestion. It allays all violent and unnatural Fermentations of the Blood; it is a fine Diuretic.

retic. To be short, I question whether there be any one natural Production now known or in use, that in all respects is so adapted to do Mankind service as this Medicin is.

I confess it has for many Ages bin in use; but how? it has only bin trifled with, being given by Grains and Scruples, whereas it ought to be by Drams, and even Ounces on occasion: and unless it were *Angelus Sala*, I remember none I ever met with that has prescribed it in large quantities besides my self; and I confess I was first excited to it by what *Angelus Sala* said concerning the cure of himself, when he labor'd under a most dreadful Colic, which had like to have cost him his Life, from which he was presently deliver'd by taking (as I remember) six Drams of *Cremor Tartar*. The like Effect I have frequently seen of it in the most violent Colics imaginable, either given in a large quantity at once, or else two drams at a time, repeated every two, three or four hours, according to the urgency of the Case.

Helmont somewhere says, that every Poison carries along with it its own Antidote; and tho Wine drank in moderat quantities be one of the most noble Cordials in Nature, yet the drinking of too large quantities causes as many Inconveniencies as any one thing: nay I believe there are more Chronical Diseases occasion'd by drinking of Wine and Vinous Liquors to excess, than from any thing else.

Now

Now I believe there is no one thing so adapted to prevent the Inconveniences that attend hard Drinking, as *Cremor Tartar* is, which is nothing but the Product of Wine it self. Nay, it not only prevents the Inconveniences of hard Drinking, but for the most part carries off the Diseases already form'd, that are caused by it.

[I have within this two or three years given som hundred Weights of *Cremor Tartar* both in Chronic and acute Cases, and don't remember that I ever observed any inconvenience by it. And for a Purge it is the most delightful in the World; none of the purging Salts, about which there is now so much Noise made, being in the least comparable to it. Nay, I am sure that after Ages will thank me for recommending so cheap and useful a Remedy to the World.]

It would take up too much to say all that might be of this noble Medicin, and I must beg the Reader's Pardon for this Digression in saying so much as I have.

Before I conclude, I shall mention one Objection more against my Opinion, made to me by several, *viz.* That a more than ordinary Saltiness is to be perceiv'd in the Blood of Scorbatic Persons, and this Saltiness they take to be an Acidity. But if they would enquire narrowly into the matter, instead of finding it to be an Acid Saltiness, it will appear to be a Lixivious, Alkalious one.

C H A P. III.

Of the Gout.

I Shall here make only som few Observations concerning the Gout, it being Cousin German to that of the Scurvy : and by what I have seen, I am fully convinced, it is not from Acids, as is generally said, that this troublesom Distemper is occasioned.

I have observ'd considerable large *Nodes*, in which are somtimes contain'd a hard chalky Substance, and of which I have seen large quantities extracted, which by many Experiments I have found to be as much an Alkaly as either *Crabs Eyes*, *Coral*, *Pearls*, &c. which I suppose no man will deny.

Now it being granted, that the matter contained in the aforesaid *Nodes* is an Alkaly, how is it possible for this Distemper to proceed from Acids, when in those very parts where the Distemper most violently rages, there are produced such large quantities of an Alkalious Substance? For if the Distemper proceeds from Acids, as 'tis generally agreed, the Patient need not clog his Stomach with Alkalies, as is usually practis'd, there being a Remedy already placed in the part affected : And I verily believe, the only reason why this Dis-

Distemper has bin accounted among the *Op-
probria Medicorum*, is from their mistaken No-
tions concerning it.

But if Men will still persist to assert that this Distemper proceeds from Acids, and at the same time own the chalky Substance beforemention'd, which is only the Morbific Matter indurated, to be an Alkaly, they must tacitly believe the Doctrine of Transmutation, tho openly they are asham'd to own it, and will ridicule those that do.

But this is not all; for suppose the Acid Matter causing this Distemper to be transmuted into a chalky, alkalious Substance, the Distemper must never more pretend to com in or near the part where this Substance is lodg'd, it being placed as a Sentinel to guard it off: Nay, the Blood at times must all, or at least a great part of it, pass thro the Part or Parts where this chalky Substance is lodg'd, by which means one would think it should be sufficiently guarded from any more growing Acid; and so by consequence, when the chalky Nodes are once settled, people have no reason for the future to fear the return of their Distemper; the contrary to which many honest Gentlemen to their sorrows experience. So that a man would think these very Nodes alone were sufficient, were there no other reasons to be given, to satisfy one who is master of his Reason, that Acids are not, but Alkalies are the cause of this Distemper. And if the

Blood abounds with too many Alkalious Particles, the giving of Alkalies must be preposterous, it being to add Fuel to the Flame, which instead of quenching or extinguishing, makes it so much the greater.

It may not be amiss to take notice, that few are troubled with the Gout, but those who drink large quantities of Wine, or some other generous Liquors abounding with vinous Spirits; so that the Blood and other Juices being impregnated with the said vinous Spirits, these Spirits meet with the volatil, alkalious Salt, of which even the Blood of sound People is never destitute; whereby the vinous Spirit is coagulated, and turn'd into that substance (or somewhat like it) which *Helmont* calls his *Offa Alba*: which coagulated substance not being capable of moving with the Blood and Juices thro the small Vessels, causes Obstructions and violent Pains, and in time, by the addition of other gross, terrestrious Particles, the forementioned chalky Substance.

By the foresaid Coagulation of vinous Spirits with the volatil Alkaly of the Blood, may a very good reason be given for the Generation of the Stone in the Bladder and Kidneys: And *Mr. Boyl* tells us (being what *Helmont* had before don) that having obtain'd some Stones of a certain *Lythotomist*, he put 'em into a Retort, and expos'd 'em to a strong Fire, and found the better half consisted of volatil, alkalious Salt, like that obtainable from Human Blood, and

a considerable quantity of heavy Oil; so that it is plain the Generation of the Stone is not from Acids, but Alkalies.

From which may be infer'd, that it is not from the Acidity of Rhenish Wine that the drinking of it is pernicious to Gouty People, but from its abounding with spirituous Particles more than most other Wines.

I shall here presume to supply a few Omissions in my Tract of the *Gout*, which I doubt not will gain more and more Reputation every day, the Method there laid down being what will generally answer expectation.

I have (*pag. 79.*) given an account of a Balsam of admirable use in taking off the most violent and tormenting Pains; which after it has bin used som time, will cause little Pimples and Blisters on the Part: Now as soon as the Blisters are once rose, the use of the Balsam must be left off, which I forgot to mention, and not be repeated again, till the Blisters or Pimples disappear.

The strengthening of the Stomach, and helping Digestion, being what generally gos a great way in the Cure of Chronical Distempers; therefore to people who either labor under a Fit of the Gout, or are subject to it, I prescribe the constant use of the following Digestive Pouder, both while they labor under a Fit, and when free from it.

℞ *Crem. Tartari Dracm. sex,*
Cardamomi, Cubebarum,
Galanga, ana Dracm. duas,
Sacchari rosati Unc. unam sem.

M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpius in die.

Instead of the *Elixir Sulphuris*, mentioned pag. 90. I frequently give the following *Elixir Vitrioli*, tho the Intentions of both are the same.

℞ *Garriophyllor. Piperis nigri,*
ana non contus. Unc. duas.
Spirit. Vini Rect. ℥ unam.

digerantur leni calore arena, in Vase vitreo optimè clauso per dies septem; tunc guttatim instilla Ol. Vitrioli optimè rectificati Uncias quatuor; digerantur iterum per dies septem in eadem calore, postea decantetur Elixir clara. Dosis est a gut. 15. ad 20 vel 30.

This Elixir is a noble Stomachic, and of admirable use in other Distempers besides the Gout.

Tartarum vitriolatum and *Cremor Tartari* I much rely on in the Cure of this Distemper; but this ought to be observed, that during the Fit they must be given in such quantities as will procure the Patient three or four Stools in the 24 hours, and no more, at least after the
the

the second or third day: But if for the first two or three days they occasion more Stools, it will rather be an advantage than otherwise. Therefore that things may be exactly regulated, the Proportions I have prescrib'd must be varied according to peoples Constitutions and Strength.

When the Pain is not very severe, the Proportion of *Ol. Vitrioli* in the Balsam may be less than I have set down, viz. two Drams of *Ol. Vitrioli* to two Ounces of *Ol. Olivarum*: Let them be well mixt together in a glass Vessel, till they com to the consistence of a Balsam. With this Balsam I have two or three times seen something extraordinary don in *adematous* Tumors; as I have also in easing other Pains besides that of the Gout.

[It being a year since the second Edition of this Essay came abroad, I have now several Observations to add to my Tract of the Gout; but considering that is also reprinting, I shall add no more in this Place.]

C H A P. IV.

Of Rheumatisms.

THIS is another Distemper generally said to proceed from Acids in the Blood, but very falsely, as I hope fully to make appear, having had to do with multitudes under this Distemper, and thanks to God, with good success.

I shall not inquire into the original Causes of this Distemper; which are various, that being foreign to my design; but immediately proceed to the business I have undertaken.

First of all; having by the Fire analyz'd the Blood of Rheumatic Persons, I have found it to abound more with Alkalious Particles than that of sound Persons, but not the least grain of an Acid Substance in it: from which alone it may readily be infer'd, That it proceeds not from Acids, but from Alkalies.

But it may be objected, From whence proceeds that *Syziness* and *Viscosity* of the *Serum*, which is observ'd in the Blood of Rheumatic Persons, if not from Acids? For we know that Milk, which is a sort of Serum of the Blood, let it be never so fluid, by the addition of any Acid, tho very gentle, a great part of it will immediately coagulat and turn into Curds.

To

To which I answer, That the foresaid Objection is altogether invalid; the Viscousness observ'd in the Serum of the Blood, being quite different from that of the Curds in Milk: tho there are substances contain'd in Milk, fit to make both Blood and Serum; but Milk is a much more compound Liquor than the Serum of the Blood: so the comparison being between Subjects vastly different, it is of no weight.

But suppose the comparison good; what agreement is there between Curds, and a Substance like Gelly? None at all that I know.

But if instead of curdled Milk, they had made the comparison between the inviscated Serum and Hartshorn Gelly, they had bin in the right; for indeed I know not any two Subjects more fit to be compar'd together. But then this comparison will not at all prove the Inviscation of the Serum to proceed from Acid, but from Alkalious Particles; for all who know what Hartshorn is, know the reason of its making a Gelly, is from its abounding with volatil alkalious Salts: and for the same reason it is, that Calves Feet, Izing-glass, Ivory, &c. make Gellies.

By what I have said, I hope I have freed Acids from causing the Viscousness of the Serum of the Blood in Rheumatisms; which Viscosity, if once taken off, the Distemper immediately vanishes: Yet this is not to be don by Alkalies, that ever I could see, tho I have given 'em in large quantities; but it is expeditiously

ously to be don by proper Acids; such as the foremention'd Tincture of *Antimony*, &c. and *Chalybeats*.

But here People will think I am caught in a Trap, when I bring in *Chalybeats* among the number of Acids, when generally own'd by all to be Alkalies: to confirm the Truth of which, they tell you it is manifest, that Filings of Iron will make as great an Effervescency with all sorts of Acids, as any of the Alkalies I have mention'd; therefore I must be much in the wrong in reckoning *Chalybeats* among Acids.

From this difficulty I shall endeavor to extricat my self, and also to prove, That Iron or Steel, till converted into a *Vitriol*, which all will allow to be an Acid, cannot act upon the Blood or Serum to cause an alteration in it, nor so much as any way to enter into the Veins or Arteries.

It is the custom of skilful Practitioners, before they give Steel Medicins, to inquire whether their Patients are sensible of any Acidity in their Stomachs: in which part I allow Acids oftentimes to abound, and that exorbitantly. If they perceive any Acidity there, it is found necessary to give Iron or Steel, without any Preparation at all, because by means of the Acids in the Stomach it is turn'd into a *Vitriol*, and so made capable of being carried into the Blood; whereas in such cases, if it has bin before satiated by a precedent

Pre-

Preparation, it has little or no effect at all. On the other hand, if there be no sensible Acidity in the Stomach, Iron or Steel given un-prepar'd, are carried off by Stool, without the least alteration, or any part of it admitted into the Blood.

[In Hypochondriacal and Histerical Persons, who mostly complain of an Acidity in their Stomachs, I have with wonderful success given four or five Iron Bullets filed from small Rods every day just after Dinner, and have ordered the continuance of them sometimes for three or four Months; and when all other Methods have failed, this has effectually taken place.]

All or most of the Preparations of Steel I know good for any thing, are perform'd by means of Acids, which tend to the dividing their parts, and turning them into a *Vitriol*. Now according to the difference of the Acids us'd, the result is a different sort of *Vitriol*, which has different operations: But on the contrary, Alkalies do so lock up the Body of Iron, as to make it unfit to be taken as Medicin, because of its extraordinary hardness and firmness of Texture.

The Preparations of Steel I generally use is that which gos by the name of Dr. *Willis*, and is almost every where to be had; which tho grown common, is no despicable Medicin, and is that which follows.

Take

Take of filings of Steel, or rather Iron, very clean and free from dust, one Pound and half; Sal Armoniac two pound: make the Sal Armoniac into very fine Powder; then mix them well together in an iron or stone Mortar; then put the mixture into a moist Cellar, and let it stand a week: Then put it into a very large Crucible, which cover with a piece of Tile; afterwards put the Crucible into a Charcoal Fire, which increase by degrees, till the Crucible be almost red hot: after it has continued in this state about an hour, take away the Fire, and let your calcined matter cool by degrees; when cold, take it out of the Crucible, and make it into fine Powder in a glass or stone Mortar; then put it into a Bottle with a wide mouth, which stop with a glass Stopple, and keep in a warm place.

[The Method I use in making that Preparation of Steel, known by the name of Dr. Willis, is as follows.

Take clean filings of Steel one Pound, Cremor Tartar three Pound; mix them well together in an Iron Mortar; then put them into an Iron or Earthen Pot; pour upon them a Gallon of Spring Water, and over a very gentle Fire evaporate to the consistence of Honey, stirring all the time with an Iron Spatula: afterwards add another Gallon of Water, evaporate as before;

fore; then take it out, and put it upon an Iron or Tin Plate: let it stand in a warm place till it is perfectly dry; then make it into fine Powder, and keep for use.]

These two Preparations properly given, and with convenient Vehicles, I have known of great use in som Rheumatisms: and the first, when all other Medicins have prov'd ineffectual, scarce ever fail'd me in the most inveterat Obstructions of the *Menses* in Women.

Besides the foremention'd Preparations of Steel, I have frequently found *Cinnaber* of *Antimony*, or even common *Cinnaber* mixt with a due proportion of *Gum Guaiaci*, and given in large quantities, to be of great use, not only in som confirm'd Rheumatisms, but even in *Sciaticas* of long standing, by which alone I have known many cured.

I formerly believ'd *Cinnaber* of *Antimony*, and common *Cinnaber* to be Alkalies; but since I have more nicely inquir'd, I find by a peculiar management, a large quantity of an acid, sulphureous Spirit may be obtain'd from them: [And unless the *Mercury*, which is a main ingredient in the Composition, be accounted an Alkaly, there is no such thing to be found in it. But for my part, what to make of that fugitive Servant of poor Chymists, I cannot tell; and must ingenuously own, after much Mony and Time spent in inquiring into the nature of it, I know no more than what I do

do by its effects, which are sometimes extraordinary, if manag'd with discretion.]

- Before I conclude this Head, it will not be amiss to observe one thing about the Preparation of Steel beforemention'd, *viz.* that while it is kept dry, and in a Pouder, it is one of the greatest *Deoppilatives*, or openers of Obstructions imaginable: But let it be put in a Cellar, and run *per deliquium*, which it will in a few days, 50 or 60 Drops of the said Oil *per deliquium*, given twice a day in a strong Decoction of *Oak Bark*, I have of late found rarely to fail in stopping a feminal Flux, which all will allow has hitherto bin found as difficult as any thing whatever. Som having told me, they supposed the Stipticity to proceed from the Decoction of *Oak Bark* only, I purposely tried it alone: and tho I own *Oak Bark* to be a noble Stiptic, and to do Wonders, the Decoction being taken at the Mouth, and by way of Clyster, in common simple *Diarrheas*, and even sometimes in bloody Fluxes; yet in the foremention'd case it would do nothing at all: but adding som drops of the Oil of *Mars* to the Decoction, it soon had the desir'd effect.

Of late I have bin induc'd to use the following Method in the Cure of Rheumatisms, and in a great number of Cases it has rarely failed me; and where it has failed, I have not had the least Temptation to blame the Method or Medicins.

℞ *Tart. Vitriolati* Dracm. unam
Cremor. Tartari Dracm. sex
Ol. Garrioph. gut. sex
Sacchari rosati Dracm. tres

M. f. Pul. in sex Chartulas distribuend. ex quibus cap. unam quater in die in Cochlear. Syr. e Rubo Idaeo, superbibendo haust. Julap. sequentis.

℞ *Rad. Eringii* Unc. duas
Aq. Font. ℥ duas

Infunde clausè & calidè per horas duas vel tres, & coletur; colaturæ adde *Vini Rubri Gal.* unc. octo
Syr. de Rubo Idaeo unc. tres
Elix. Vitrioli gut. 40. M.

℞ *Elix. Vitrioli* Dracm. duas
 cap. gut. duodecem in haust. *Vini Rub.* &
Aq. Font. ana p. e. horâ dimidiâ ante prandium.

℞ *Sp. Vini non Rect.* unc. sex, vel octo, vel decem.
Ol. Vitrioli Dul. unc. unam.

M. f. Mixt. cum quâ embrocantur Partes affectæ manè & serò, superponendo Pannum laneum.

℞ *Cremor Tart.* Dracm. sex
Cardamomi, Cubebarum,
Galangæ, ana Drac. duas
Sacchari Rosati unc. unam semis.

M. f. Pul. cap. quantum Mucroni Cultri contineri potest sæpius in die. After

After the Pains are quite gon, I prescribe a Steel Course for 3 Weeks or a Month, and during that time a continuance of the *Elixir of Vitriol* before dinner, and of the *Digestive Pouder*.

But in this case, as well as in the Gout, the quantity of *Cremor Tartar* and *Tartar Vitriolatum* ought to be such, as to occasion 3 or 4 Stools in 24 hours, and no more, at least after the first day or two; and therefore as peoples Strength and Constitutions vary, the quantities ought to be lessen'd or increas'd, as occasion is.

The *Oleum Vitrioli Dul.* for the *Embrocation* is as follows; that commonly sold in the Shops, which is made by Distillation, being good for little or nothing.

℞ *Ol. Vitrioli opt. rect.*

Sp. Vini Rect. ana p. e.

Cum cautelâ misceantur, & postea digerantur leni Calore arenae, in Vase vitreo optimè clauso per dies decem, & reservetur ad usum.

[To conclude, and as an addition to this Edition of my Essay, I shall make the following remarks, being the effects of farther observation.

Rheumatisms, properly so called, may be distinguish'd into *Acute* and *Chronic* ones. An *Acute Rheumatism* is as much an inflammatory Distem-

Distemper as a *Pleurisy* or a *Peripneumony*; but by reason the offending Matter is not lodged on any of the noble parts, the consequence is not so fatal. Now people being illtreated in Acute Rheumatisms, their Distemper becomes a Chronic habitual one, which perhaps hangs upon 'em for many years, with many instances of which I have of late met. Now in Acute Rheumatisms, I always or mostly use the last Method, only omit the Digestive Pouder; and somtimes instead of the Embrocation, I bathe the Parts with good *Elder Vinegar*, or Vinegar impregnated with other Aromatics; and let them drink plentifully of *Lemonade*, or other acidulated Liquors. After the Distemper is over, to confirm the Tone of the Parts, which can't fail of being debilitated by the great pains, I put them into a Steel Course for three Weeks or a Month. In Chronic ones, where the Blood is fizy, I use the same Method with the digestive Pouder; and in neither of them scarce ever fail of Success. But in Chronic Rheumatisms, where the Blood is not fizy, I give the foremention'd Medicins, with *Gum Guaiaci*, &c. where they want Evacuations; which, as is elsewhere observed, being given in due quantities, never fails to prove a noble Purge. But where they do not want evacuations, I altogether rely on proper *Chalybeats*, suited to the Constitution. This Subject alone deserves a particular Treatise; but I have already promised so much, that I can't

think of any such thing, till what I am about is finished, which will not be in a short time.]

C H A P. V.

Of Consumptions.

I Have little to say at present on this Subject, but that I have seen great numbers of People under this circumstance, to whom large quantities of Alkalies, all sorts of *Balsamics*, and those things called *Pectorals*, have bin given without the least advantage; tho I have seen others that have had the manifest signs of a confirm'd *Phtisis* or Consumption, who by the plentiful use of proper Acids have bin reduc'd from a state of dying to perfect Health.

My Reasons in short, according to the best Observations, for the use of Acids, and the disuse of Alkalies, are as follow.

The Globules of the Blood, by reason of too great a quantity of Acrid, Alkalious, Lixivious Particles mix'd with it, being broken, and confusedly mix'd with the Serum, are together with the Serum admitted into the small Glandules of the Lungs; and not being capable to be discharg'd, cause Inflammations there, and by consequence Hectic Fevers, which always precede and accompany a *Phtisis* or Consumption. Now by the use of Alkalies and

and Balsamics, these extravasated, broken Globules are so far from being thrown out, and the deprav'd state of the Blood from being alter'd, that it is made much worse; and by Balsamics the Pustles, occasion'd from the extravasated Globules being admitted into the small Glandules, are brought to Suppuration, the necessary consequence of which is an Ulceration; and when so tender a part as the Lungs is once ulcerated, he must shew himself an Artift indeed that can heal it.

Now proper Acids given in due time, confirm the Texture of the Blood, and reduce the Serum to a state of fluidity, wherby the Fever and Inflammation of the Lungs are taken off: and the extravasated Globules of Blood, by means of a thin Serum, assisted by its quick motion in that part when in a fluid state, are by degrees carried off, and so the Pustles disappear.

But it may be objected, How com the broken Globules of the Blood you so often mention, to be admitted with the Serum into the Glands of several parts, and yet cannot by the same reason be carried to the parts design'd with the Serum or *Lympha*, as it is stil'd, when it once coms into the Lymphatic Vessels?

To which I answer, That when they are first admitted into the Glands, I mean the broken Globules, coming just out of the extremities of the Arteries, and being then very hot, the sides of them are lax, and in som measure

sure capable of being comprest or squeez'd together ; but when once admitted into the Glands, the motion of the Serum from them, thro the Lymphatic Vessels, being very slow, they soon grow cool, and so more firm ; and by reason of the different figure of these broken Globules from the Pores, by which the Serum is to pass from the Glands to the Lymphatic Vessels, they are not suffer'd to go thro with the Serum, as in the foremention'd instance of Oil and Water : so that the Globules being extravasated and without motion, corrupt, from which Corruption proceed all the ill Symtoms that accrue from the broken Globules of the Blood being admitted into the Glands.

I am furnishing my self with Materials, in order to write a particular Tract concerning Consumptions ; in the Cure of which Distemper I hope to make more considerable Advances than have bin yet made, and therefore shall say no more concerning it in this place.

But to return to Acids. To confirm the truth of what I have said, besides my own Observations, I remember *Riverius*, that famous Practitioner, somewhere says, That he several times cur'd a confirm'd *Phtisis* or Consumption, by giving only large quantities of Conserve of red Roses, well acidulated with Oil of *Sulphur per Campanam*.

And now I am speaking of that Oil, let me add the account *Hellmont* gives of it in his *Arbor Vitæ* ; which tho it has no immediat relation

tion to the Point in hand, yet may be pertinent enough, to shew the good effects of Acids in keeping the Blood in a good Texture, and by that means prolonging Life, and preserving us from Diseases. *Moses*, who perhaps understood the Mysteries of Nature as well as any Man, and was guided by an infallible Spirit, says, that in the Blood is contain'd the Life. Now the Texture of the Blood being confirm'd, and its Globules whole, must go a great way towards prolongation of Life: But on the contrary, the Texture of the Blood being spoil'd, and its Globules broken (which they are by Alkalies) must in great measure shorten Life, and occasion Diseases.

In the Year 1600, says *Helmont*, a certain Poor Man, being burden'd with many small Children, complain'd to me that he was 58 years of age, and if he should chance to die, his Children must go a begging. He ask'd of me something, wherby his Life might be preserv'd. I being a Young Man, and commiserating his Condition, consider'd that a lighted Match of Brimstone would preserve Wine from Corruption; and therefore concluded, that the Acid Oil of Sulphur did necessarily so contain this Flame of Sulphur, and all the Smell of it, that it self was nothing else, meaning the Acid Spirit or Oil, but the Fume of Sulphur it self, imbib'd by its Mercurial Salt. Last of all, I was confirm'd that the Blood was the Wine of our Lives; and that being preserv'd,

if it occasion'd not long Life, would at least in some measure lengthen it, by our being guarded from Diseases, and free from Pains. Wherefore I gave him a Pot full of the distill'd Liquor, or Oil of Sulphur, and likewise taught him to distil the said Oil from kindled Brimstone. I furthermore bid him take every Meal in the first draught of Beer he drank, two drops of the said Liquor, and by no means exceed it; I being satisfied that two Drops did contain a large quantity of the Fume of Sulphur. The Man followed my Advice, and now walks about the Streets of *Bruxels*, being 1641. And, which is more than all, for the whole 40 years he never labor'd under any Distemper, tho once by a Fall on the Ice he broke his Leg near the Knee; yet all the time he was under Cure he was free from a Fever. He continued slender and lean, and tho in want of all necessities, liv'd to be thus old. The Name of this old Man is *John Mass*, who served in the Bed-Chamber of the Bishop of *Tyre* when Count *Egmont* and *Horn* were beheaded, and was then 25 years of age.

The Truth of this Relation need not in the least be doubted, the Man being alive and well when it was wrote. By which Instance it is plain, that Acids are not the Cause of Diseases, but Preservatives against them; and whatever is a Preservative from Distempers, by parity of reason must be of use to repel them.

A signal Instance of which I remember I have somewhere read, of a Person who suffered himself to be bit by a Viper, in order to try the good Effects of Monsieur *Charras's* Volatil Alkalious Salt of the same Animal, in preventing and taking off the Symtoms that attend the Biting of the said Creature. The Volatil Salt and other Antidotes were in large quantities given, but all in vain; for instead of allaying, the Symtoms so increased, that nothing less was to be fear'd than the loss of the poor Man's Life. To the best of my remembrance, nay I think I may be positive, it was in the Wrist where he was bitten; but for all the Volatil Salts and other Antidotes, in a little time his Arm was swel'd so big, and so high, that Amputation could do him no service; nay, all the By-standers, that were many, gave him up for dead. At last a certain Person advis'd giving large quantities of only so simple an Acid as Juice of *Citrons*; which immediately abated the Symtoms, and retriev'd him from all manner of Danger. [See more of this matter in my Account of the Cure of the Person bit by a Viper.]

We live in an inquisitive Age, wherein People have more sense than to take things on trust: The obtaining of the Blood both of healthy and distemper'd Persons, is not difficult; and I desire no greater justice, than that People would themselves try the truth of what I have said: and if after trial it be found that

the Blood of persons in any of the forementioned cases, has any Acid abounding in it, I will own my self in the wrong ; but shall never take the least notice of such scurrilous Answers as I have bin used to, nothing of that nature being in the least valid with me that is not confirm'd by well-attested Experiments.

The Conclusion.

IT is, I suppose, allowed by all that *Sea-Salt* is an Acid, and for that reason only, we who eat so much Flesh are not able to live without it. For all sorts of Flesh abounding with large quantities of volatil Alkalious Salts, if these were not in som measure lock'd up and mortified by the means of Sea-Salt, or (which is all one) what is the product of our English Brine-pits, which have their saltness from the same origin, *viz.* Currents of Water passing thro great Rocks of Salt ; which late Discoveries have made appear to be both in *England*, and many other parts of the World ; as for instance, one in *Cheshire*, whose Vein is 20 Yards thick, and may be traced for many Miles together ; which alone is sufficient to impregnat almost an Ocean of Waters: I say, were it not that the Volatil Alkaly contain'd in the Meat we eat was in som measure lockt up

or mortified by means of the foresaid Salt, the eating of quantities of Meat would certainly destroy us. [The constant use of Bread also is of no small advantage to us, it being a Substance greatly abounding with Acid Particles, as by the analyzing of it will easily appear.]

There is reason to believe, That before the Flood People did not eat Flesh, but liv'd altogether on Vegetables, as Fruits, Herbs and Roots; which I suppose was one great reason of their Longevity. And it may be observ'd, that in *Herefordshire*, and other Countries abounding with Fruit, the People are longer liv'd than in those Countries that want it. But had the *Antediluvians* eaten Flesh, as we do now, I can't imagin what they would have don for Salt: for supposing Dr. *Burnet's* Hypothesis true (of which I think there is no reason to doubt, his Arguments being to me unanswerable) I suppose their Rivers must have bin altogether void of Saltness; and how they could com at Salt any other way, considering the state of their Earth, I can't imagin: And for them to have eaten Meat without Salt must necessarily have greatly prejudic'd their Healths, and shortned their Lives. For we have seen in the late *Irish* Wars great Destruction and Desolation in our Army by eating Meat without Salt, of which at one time there was a scarcity; whole Regiments having bin swept away together with Fevers and Fluxes. But the *Antediluvians* living on Vegetables,

tables, had no need of Salt, there being a sufficient quantity of Acidity in them to confirm the Texture of their Blood, and preserve them from Diseases.

That the Food of the *Antediluvians* was only Herbs, and the eating of Flesh was not allowed till the Waters of the Flood were abated, the following Texts evince. *Gen. 1.29.* After God had said to *Adam*, *Be fruitful, and multiply, and replenish the Earth*, and had given him Dominion over the Creatures, it comes in; *And God said, Behold, I have given you every Herb bearing Seed, which is upon the face of all the Earth, and every Tree in which is the Fruit of a Tree yeilding Seed; to you it shall be for Meat.* After the Waters of the Flood were gone, God blesses *Noah* and his Sons, as he had before done *Adam*, and said to them, *Be fruitful, and multiply, and replenish the Earth*; and then gives them Dominion over the Creatures: after which he says, *Ch. 9. 3. Every moving thing that lives shall be Meat for you; even as the green Herb have I given you all things.* Now after the use of Flesh was allow'd, we find no one person, *Noah* excepted, who arrived to the Age of any of the *Antediluvian* Fathers, the natural reason of which is very plain.

Since I have bin mentioning *Sea-Salt*, I shall make bold to relate a strange and accidental Cure wrought on a Person in a *Tympanitis*, given over as incurable by the most eminent

ment Physicians of *England*, by barely immersing her two or three times over Head in Sea-Water.

The Person was Daughter to an eminent Citizen of *Worcester*; she had labor'd under a *Tympanitis* three or four Years: her Father applied to most of the eminent Physicians for Advice, but all they could do signified nothing. He has several times told me, that his Cloak, tho he was a corpulent Man, would not lap round her, her *Abdomen* was swel'd so big, and she then not above ten Years of Age. It happen'd one Morning that her Mother, two Brothers, her self, and a Maid-servant, were bitten by a little Dog they had, that was grown mad. Advice was presently given by Dr. *Johnson*, an eminent Physician then in *Worcester*, that they should all go to the Salt-Waters to be dipt; (observe by the way the efficacy of these Waters in preventing the dreadful Symtoms that attend those bitten by Mad-Dogs.) The Mother, with her two Sons and Maid-servant prepar'd to go; but she did not design to take her Daughter with her, supposing her not capable of living till she came to the Journey's end. The poor distressed Child seeing 'em all going away without her, told her Father he took care of every body else, but valued not what became of her; on which he being moved with compassion, resolv'd she should go, let the event be what it would. Accordingly she was carried down, and when she came to
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be dipt, it was as much as two Men could do to immerge her over Head: After they were all dipt, they were carried to an adjacent House, and put to Bed, where she had not bin many Hours, but she call'd for a Pot, and piss'd several Quarts, even more at that one time, than she had don som Months before; and when they return'd to *Worcester*, which was within a few days, she run out of the Boat to her Father without any help, tho she had not bin able to stand of a year or two before. To be short, without any other help, she was perfectly cur'd of her *Tympanitis*, and is now a tall, slender, healthy Woman as any I know.

I have mention'd this thing, because I find it no where taken notice of, and it may be of service to others. Nay, I am told a certain obscure Person in *Herefordshire* has cur'd several by the same Method, to his great Advantage, who withal says, it never once failed him.

I beg the Lady's pardon for writing this Relation without her leave; but since I have no other end in it than to serve Mankind, I doubt not I shall be excused.

Helmont positively says, and I have found it true, That Spirit of Sea-Salt which is an exalted Acid, is a certain Remedy in the *Strangury*, a Distemper generally said to proceed from Acids; which if it dos, instead of being cur'd, must be highly exasperated by Spirit of Sea-Salt, the contrary of which I have frequently experienced. *Helmont* somewhere
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else says of it, *Est namque Acidissimus, nec sibi par habet remedium extinguendis ardoribus Urinae, etiam praesente in Vesica Calculo.*

I remember not long since an Eminent Physician told me, that bare Juice of *Lemons* would sooner take off the Heat of Urin in People that are, as we call it, clap'd, than *Emulsions*, or any thing commonly used: which since I have found true; and also that the Urin of such Persons abounds more with Volatil Alkalious Salt, than that of sound People: Upon which I have bin induc'd to try whether the Acid Spirit of *Guaiacum*, which that Wood affords in large quantities, would not be more prevalent in the Cure of confirmed Poxes, than the bare Infusion or Decoction of the said Wood; which in conjunction with *Cinnaber* of *Antimony* or common *Cinnaber*, and *Gum Guaiaci*, I have frequently given with good success in confirm'd Poxes; nay, som that have eluded the Force of a regular Salivation, I have cur'd by this Method.

I am apt to believe, if the rectified Acid Spirits obtainable from most, if not all Woods, were us'd, they would be found to be great *Specifics* in most Distempers, especially Chronical ones. And I have great reason to think that rectified Spirit of *Ash*, taken for a considerable time together morning and evening in a proper Vehicle, would prove a noble Medicine, in gradually wasting Stones already form'd either in the Kidneys or Bladder.

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And since I have mention'd *Specifics*, I own it may be rationally objected, That my Doctrin of *Acids* dos mightily thwart that of *Specifics*, of which many, that are neither *Alkalies* nor *Acids*, seldom fail of curing Distempers, as likely to be supposed to proceed from *Alkalious Particles* abounding, as any whatever.

To which I answer, that I have only brought my Doctrin upon the Stage, as a general one, in opposition to that general and pernicious one of *Alkalies*. For should I deny the Doctrin of *Specifics*, I must deny matter of fact; which I shall never do till totally depriv'd of my Reason.

There is a little Herb called *Paronychia cum Foliis Rutaceis*, or *Whitlow Grass*, with Leaves like *Rue*; which the Honorable Mr. *Boyl* recommends as a Specific in the King's Evil: This Herb I have immerg'd both in moderately Acid and *Alkalious Liquors*, and could perceive no *Luctus* or Effervescency; yet I have known it do wonders in the foremention'd Distemper, without having the least sensible Operation: I shall give one instance.

A poor Woman in *Worcester* having an only Child of about ten Years of Age, who by weaving Bone-lace maintained both her and it self, made a great complaint to me one day that she was undon. I asked her the cause; she told me, her Child who kept her in her old Age from Begging, had for two Years had Scrophulous

phulous Tumors in and near her Privities; and that about three Months before, one of the said Tumors began to ulcerat; and that now the Ulcers were got into her Body, which made her uncapable of Sitting. I went immediately with the Woman to see her Daughter, and found what she said was true, the poor Girl being the most miserable Spectacle I ever saw. I remembring what Mr. *Boyl* had said concerning *Paronychia*, and being sufficiently satisfied there was no reason to doubt of any thing he had said, when related as matter of Fact on his own Knowledg, resolved to try it upon this Girl. I first purged her three or four times with *Calamelanos*, *Razin* of *Jallap*, and *Cremor Tartar*; and afterwards gave her two large Handfuls of the said Herb dried, ordering her to put it into two Gallons of small Beer after it had don working, and to let it stand six days, and then drink it for her constant Drink: She continued to take it for about two Months, in which time, without applying any thing to the Ulcers save clean Clothes, both Ulcers and Tumors vanish'd; and she continued well till I left *Worcester*, which was two years after the Cure, and is so still for ought I can hear, having several times inquir'd after her.

[I have several times since made use of the said Herb with good success, tho I cannot say it will always succeed, there being som *Scrophulous* Cases, wherein nothing yet known will take

take the least place. I have seldom recommended Medicins without full trial, but at this time shall presume to propose the use of *Stavesacre*, applied by way of Pultice to inveterat scrophulous Tumors, at the same time using such evacuating Medicins as won't debilitate Nature. The reasons for my recommending it I think not fit to take notice of now; but if I find it answers expectation, I shall do it hereafter.]

Another Instance of the Operation of Specifics, without their being either Alkalies or Acids, is that frequently experimented Decoction of *Mercury*, after having bin boil'd a considerable time in Water, which has bin found not to lose the least Grain of its former Weight, or impart either Taste or Color to the Water; yet the Water in which the Mercury was decocted, has not fail'd of killing and bringing away Worms, when other celebrated Medicins have.

Likewise *Crocus Metallorum*, and other Preparations of *Antimony*, being barely infus'd in Wine, without losing the least Grain of their Weight, or imparting either Smell, Taste, or Color to the Wine in which they are infus'd, never fail of giving the Wine a violently *Emetic* Quality. I have at several times pour'd above 20 Quarts of *Canary* upon the same Ounce of *Crocus Metallorum* powder'd, and found the last Quart as violently *Emetic* as the first; tho after nice trial, I could not perceive

ceive the Pouder diminish'd one Grain in Weight, or had, as before observed, caus'd the least sensible Alteration in the Wine.

The *Cortex*, that noble Specific in all intermitting Fevers, I don't apprehend to perform its office either as an Alkaly or Acid; tho being mix'd with Acids, it dos its work much better than without 'em.

It is a general Complaint against that noble Medicin, and is the only occasion of deterring som from the use of it, That being given in never so large quantities, especially in *Quartans*, it only puts off the Fit for a time, but dos not totally eradicat the Distemper, which returns after a certain period. To obviat which Inconvenience I have bin advised to give it after the following manner, which seldom or never fails of preventing the return of the Distemper.

Two Hours before the Fit, I give a gentle *Emetic*; after that has don working, an *Opiat*: when the Fit is over, I give the quantity of a large Nutmeg of the following Electuary with the Decoction, and repeat it every 4 hours for five or six days, ordering my Patients to eat somthing of easy digestion within an hour after each Dose. After five or six days, I give it only first in the Morning, and at five in the Afternoon for a Week, eating somthing after each Dose.

℞ *Cort. Peruviani elect. Unc. unam;*
reducetur in pulverem impalpabilem &
L. *cum*

*An Essay concerning
cum Syrupo Limonum, q. s. f. Electua-
rium.*

Immediatly after each Dose I give about a quarter of a Pint of the following Decoction :

℞ *Cort. Peruviani elect. Unc. unam.
Rad. Gentiana Dracm. duas
Flor. Centaurii Pug. duos
Aq. Font. ℥ quatuor,*
*Bulliantur ad dimidia partis consumptionem, &
coletur ; colatura reservetur ad usum.*

By this Method I have known three or four Ounces of the *Cortex* perfectly cure *Quartans* without any Relapse, after taking a Pound or more in the common Method, which has onely put by the Fits for a time.

The Reasons, as I apprehend, why this method of giving it should be more prevalent than that commonly us'd, are ; the Particles of the *Cortex* being very firm, the Medicin being taken, and the Patient fasting three or four Hours after it, it slides out of the Stomach into the small Guts, and so on : the small Guts being emty, there is not pressure enough to squeeze but a small quantity of it into the Lacteal Vessels ; so that the greatest part of it is carried away as Excrement : But the Patient eating something of easy digestion, within so small a time as an Hour after it, that eaten, is turn'd into Chyle before the Particles of the

Cortex

Cortex can be carried off; and the Chyle being of a viscous Nature, retains the small Particles, and carries 'em with it into the Blood: so that the Blood is more impregnated by one Dose given this way, than with twenty Doses without presently eating after it.

To confirm the truth of what I have said concerning the firmness of the Particles of the *Cortex*; if you boil it never so well, the clear Decoction will scarce cure a *Quotidian*, or *Tertian* Ague: whereas the *Cortex* after it has bin well boil'd, being reduc'd to Pouder, and given after the foresaid manner, will cure a *Quartan*.

It would be a great Blessing to the Commonwealth of Physic, if there was a faithful Record kept of all the Cures wrought by simple Medicins, wherby Physicians might arrive to a certainty of curing more Distempers than that of Agues; which I never expect to see, so long as tedious, nonsensical Compositions are depended on.

I don't remember any of the antient or modern *Botannic* Writers have mention'd the Leaves of *Assarabacca* to have any other quality than that of a violent Purger by Vomit and Stool: But Mr. *Pit*, a late eminent and learned Apothecary of *Worcester*, my good Friend, told me, that he found it to be one of the most noble Purgers of the Head he ever knew, having a different Operation from any other Medicin he ever met with; that the snuffing up of three, four, or five Grains of the Pouder of

the dried Leaves at Night going to Bed, would on the Morrow, without disturbing rest that Night, but rather causing it, occasion the discharge of a vast quantity of serous Matter from the Glands of the Nose; nay, would sometimes last for two or three Days, without being in the least a *Sternutatory*.

By the repeated use of this Pouder alone, I have known the most violent confirmed Headachs imaginable taken off, after they have eluded the efficacy of the most noble, celebrated *Cephalics*: But this ought to be minded, That whoever takes this Medicin, must confine themselves to their Houses, and keep as warm as if they had taken the most violent Purge.

I have bin told by a certain Gentleman, who uses a great quantity of the Pouder of this Herb among his poor Neighbors after the foresaid manner, that he was once induced to use it in a Deafness of long standing: he gave the Patient four or five Grains to snuff up into each Nostril every fourth or fifth Night, and order'd three Grains every Night to be blown with a Quil into each Ear; and in a Fortnight the Party recover'd his Hearing as well as ever.

Not long since I was told by a worthy Gentleman, that a Person who had bin deaf 14 Years, was induc'd to try whether the *Assarabacca* would do him any Service, and in a little time, using it after the forementioned manner, he was perfectly restor'd to his Hearing.

I could expatiate largely concerning simple
spe-

specific Remedies. But what I have said is enough to satisfy the World, that I allow the Doctrin of *Specifics*; nay I think it ought to be lamented it is not more cultivated.

I have bin told by som intelligent Persons, who have much convers'd with the Natives of *West-India*, that the Doctrin of *Specifics* is mightily cultivated by those barbarous People, wherby they have arriv'd to a certainty in curing most Distempers; and that to see People of 120, and 130 Years of Age, is as common, as in *England* to see People of 60. Now what a shame is it for us who live in a learned and inquisitive Age, to be outdon by those barbarous and illiterat People? Nay, for ought I know, the greatest part of our Skill we had from them, or a People altogether as ignorant.

The Physicians of *Europe* are not arriv'd to so great a certainty in any thing, as in the cure of Agues; and who may we thank for that but the poor *Indians*, who imparted to us the use of their famous Bark?

From whence had *Hippocrates*, that Father of Physicians, his Skill, but by collecting the common Observations? which alone made him so famous throout the World. But the State of Nature is much alter'd in that long tract of time since he lived; and the difference of our Climat from that wherin he lived, makes his Observations not altogether hold good with us. So that if we will arrive to any certainty in our Art, we must make nice Observations of our own.

Helmont in his Treatise of Fevers says, *Quisque Artificum facit quod promittit, Statuarius nempe Statuam, Calcearius Calceos indubiè parat; solus autem Medicus nil audet ex arte spondere suâ, quia nititur Fundamentis incertis, per accidens duntaxat, subinde, atque dolose proficiuus.* Which is, that there is a certainty in all Professions but that of a Physician; and it is altogether our own Faults, for want of due Observation, that we act on such Uncertainties as we do.

But to return to the business of Acids; What great benefit does Mankind in general receive from Mineral-Spring-Waters? All of which are allow'd to be Acids; and according to the difference of the Acid contain'd in 'em, they have different Operations. Some of them, as *Acton, Epsom, Dullidg, Northal, &c.* abounding with *Aluminous*, as well as *Vitriolic* Particles, work by Stool. Others, as *Tunbridg, Astrop, Ilmington, &c.* abounding with *Vitriolic* Particles only, are Alteratives, and generally carried off by Urin. The *Bath-Waters*, abounding with *Nitro Sulphureous* Particles, have a different Operation from any of the former, but are generally carried off by Urin, tho sometimes by Sweat.

There is scarce a Person laboring under any Chronical Distemper, or ill habit of Body, whose Fortune or Business will permit him, but at the proper Season is sent to one of the foremention'd Places; and I believe, to our no

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great Credit, that more People are freed from Chronical Distempers by the use of Mineral Waters, than by all other Prescriptions: Tho I am well satisfied that Mineral Waters, not properly taken, do frequently a great deal of Mischiefe.

Besides the service don to Mankind by drinking Mineral Waters, what advantage accrues to many laboring under som sort of Nervous Distempers, &c. by merely bathing in the Nitro-sulphureous Hot Baths? But this ought to be observed, that the bathing in Hot Baths is only serviceable to those whose Nerves are contracted; but in all Cases where the Parts are relaxed, it is highly pernicious.

There is also a new way of Sweating by means of the Volatil Acid Steams arising from the evaporating Brine, in making Salt at our English Salt-pits, lately invented by Mr. *Henry Hodges* of *Droytwych* in *Worcestershire*, wherby several great things have bin don, even where the *Bath*, common *Hummums* and *Bag-nios* have altogether proved ineffectual. I am sorry I am where I cannot procure a number of Experiments to insert in this place, which might be of service to Mankind: but to supply their room, I shall add something don in a little Bathing-House I erected of my own, wherin I imitated, if not outdid the way of sweating at *Droytwych*; but my many Avocations hindered me from prosecuting it.

I procur'd som of the *Virgin-Salt* from the Salt-Rock in *Cheshire*; and, as I had occasion, dissolv'd a convenient quantity in Spring-Water, making a Brine as strong as that obtainable from the Brine-Pits; with this Brine I fill'd a large Iron Pot, which had Pipes of Wood that went from it to a little Room over-head, made convenient for People to sweat in: Under my Pot I made a fire, which both warm'd the Room, and made the Brine to boil; and from the boiling Brine arose such quantities of Steams as fill'd my Room, which, when warmed and full of Steams, was fit for use: I had, beside the large Pipes which supplied the whole Room, several others of different lengths, by the means of which I more forcibly conveyed the Steams to any particular part. By this way of Sweating, I knew a Gentlewoman cured, as was also one at *Droytwych*, of an inveterat Leprosy, which had eluded the Efficacy of all other Medicins and Baths. It rarely fail'd taking off the most violent old Aches and Pains. In all Relaxations of the Nerves and Tendons, I never met with any thing comparable to it. To be short, I found it as good as the Bath in most things, and in many out-did it; and I believe Mr *Hodges*, computing the time he used the way of Sweating at his Brine-Pits, and the number of People he had, can produce a greater Catalog, and more considerable Cures wrought, than have bin at the Bath.

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But here it may fairly be objected, that I allow the bathing in Hot Baths to be only serviceable where the Parts are contracted, and pernicious where they are relaxed: Yet I commend the bathing in these hot Steams, as of admirable use where the parts are relaxed; in which there seems a plain Contradiction.

To which I answer: That while People are incompassed in the Steams, and sweating, there is a universal Relaxation of all the Parts; but the Steams proceeding from the Dissolution of the Virgin Salt, which is full of Volatil Acid Particles, the parts being greatly relax'd in Sweating, are capable of receiving the said Particles into them, wherby, as soon as the sweating is over, they regain a greater Vigor and Contraction.

I hope by the means of Experimental Philosophy, so happily begun and encourag'd by that admirable, and never sufficiently to be valued Mr. *Boyl*, to see the Art of Physic arrive to as great a Certainty and Perfection as other Arts and Sciences. For, as I before observed, by chymically analyzing the Blood and Juices, both in their natural and morbid states, we may arrive to som certainty in the knowledge of the Cause of Distempers, of which I am afraid we have hitherto bin greatly ignorant; and when once their Causes are thorowly known, their Cure will not be difficult.

I shall conclude in the Words of that industrious Philosopher by the Fire, *Helmont*, in his
Trea-

Treatise De Lithiasi. In nostris furnis legimus, non esse in Natura certius sciendi genus ad cognoscendum per causas radicales & constitutivas rerum; quam dum scitur quid, quantumque in re quaque sit contentum. Ita quidem ut cognitio & connexio causarum, non constant clarius, quam cum res ipsas ita recluseris, ut coram prodeant, ac velut tecum loquantur. Siquidem entia realia, duntaxat stantia, in suis primordialibus, & succedentibus in seminum Principiis, adeoque in verâ entitate Substantiali dant notitiam, & profuerunt causam cognoscendi Naturam Corporum, mediorum & extremitatum, Quippe sunt causa generationis, existentiae & permutationis, secundum ipsorum radicem, quoniam (teste Raimundo) utcumque Logicus habeat profundum ingenium Argumentabile, aut Naturale, de rebus extrinsecis; tamen nunquam per aliquam rationem quæ venit ad sensum, poterit directè cognoscere, nec judicari, cum quali natura, aut virtute, per fortitudinem intrinsecus, habeat Multiplicatio grani, crescere super terram, nisi pro similitudinario ab observatione desumpto. Nec sciet unquam, quomodo semen in terra pullulet, crescat, & colligat fructum: Nisi cum doctrina experimentalis primò intraverit in nostram Philosophiam Naturalem, & non Sophisticam sermocinalem illam, quæ nascitur Logicis, per diversas præsumptiones Phantasticas; qui cum prognosticationibus sequellarum, contra vim Naturæ, faciunt multos pertinaciter errare in Sophisticatione mentis. Quia per nostram mechanicam Scientiam, intellectus est rectificatus,

ficatus, vi experientia, respectu oculi, & vera
notitia mentalis. Imo experientia nostra stant
supra probationes Phantasticas Conclusionum;
ideoque nec eas tolerant: Sed omnes alias Scientias
ostendunt vivaciter intrare in intellectum. Unde
deinceps intelligimus per Naturam, intus illud,
quod est, & quale est. Quia per talem Scientiam,
intellectus stat denudatus superfluitatibus & er-
roribus, qui ipsum ordinario remouent à veritate,
propter præsumptiones & præjudicata credita in con-
clusionibus. Hinc enim nostri se direxerunt ad
intrandum per quamlibet scientiam (in omnem
experientiam) per artem, juxta Naturæ cursum,
in suis univocis principiis. Spagyria enim sola
est speculum veri intellectus; monstratque tan-
gere, & videre veritates earum in claro lumine.
Nec fert argumenta logicalia, quia nimis remota
& longinqua, de claro lumine. Ideoque habet ta-
bula smaragdina: Per hoc genus demonstrandi, fu-
giet à te omnis obscuritas, & acquiritur tibi omnis
fortitudinis fortitudo fortis, vincens omnia subti-
lia, & solida penetrans. Propterea vocor Hermes
Trismegistus, habens tres (id est omnes) Partes
Philosophiæ, atque totius mundi Telesmon; Hac
ille inter orare ergo & pulsare, supponitur Medium
in Naturalibus, querendi per ignem.

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Some Farther
CONSIDERATIONS
Concerning
ALKALY and ACID,
Being an
APPENDIX
To a Late
ESSAY.
WHERIN

The Terms are made Clear, and the Natures
of them more fully Explain'd.

Together with an Answer to the Objections
rais'd against som Things contained in the
Essay.

By JOHN COLBATCH, a *Member*
of the *College of Physicians.*

The Third Edition, with som Additions.

L O N D O N,
Printed by J. D. for D. Brown, 1698.

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(175)

TO THE
Learned and Ingenious
Dr. EDWARD BAYNARD,
Fellow of the College of Physicians,
LONDON.

Honored Sir,

THE Civil and Gentleman-like
Treatment I met with the first
time I saw you, and the many
Favors receiv'd from you since I was ho-
nored with your more intimat Acquain-
tance, embolden me to prostrate this
Trifle at your Feet. I pretend not ther-
by to merit any thing from you, but on-
ly to acknowledg the many Obligations
under which I lie. It would be a Wrong
to you for me to declare your Praise,
your Merits being better known than I
am

am able to represent them. It was you, *SIR*, who were (for ought I know) the most early Cultivator of the Doctrin of Acids in the Cure of Diseases in this Nation; and the Success you have had in your Practice, sufficiently makes it appear, that you well understood what you went about, when you durst contend with the whole World, by treading in a new Path to aid and succor Life, in which few Physicians ever went before. *Maeste ! SIR*, in so great a Work as saving from the Grave; so shall the Name of *BAYNARD* not be known to the Widow, nor the Cries of the Fatherless entail Vengeance on your House. And would your Multiplicity of Business permit you to collect your own Observations, and make them public, I am sure the Mouths of all your Opposers would be for ever stopt, and their Errors cur'd by your healing Hand; for I know your Charity extends to Lunacy, as well as other Diseases: And none but the Moonfick can doubt so known and clear a Truth, as are the daily and most
appa

apparent Cures don by the happy Discovery of the use of Acids. 'Tis well known, *S I R*, that Nature and Art have sufficiently arm'd you for any Enemy, if such there be; tho your condonable Disposition is like the Sun, which shines even upon those Curs that bark at him. Your Pardon, *S I R*, I crave for this Trouble, and doubt not to meet with a Generous Acceptance and Protection from you; and if Dr. Baynard espouses my Cause, I care not who is against me. I assure you I bring no common Inclinations to serve you; neither would I by ordinary Testimonies express that Passion wherewith I am,

S I R,

Your most Humble, and

most Devoted, Servant,

JOHN COLEATCH.
M

The PREFACE.

I Have so inquir'd into the Causes of Diseases, as to be altogether certain of the truth of my Hypothesis already advanced, which I am now in some measure endeavoring to confirm: But I pretend not at all to have arriv'd to so much Certainty as by my Methods to make People Immortal, and that no Person shall die with whom I am concern'd, which is what I believe some have expected. But for my part, I shall always intirely submit to, and have respect for the Providence of God, who alone is the Author and Disposer of our Lives, and by the Mouth of an inspir'd Writer has declar'd, That our days are determin'd; and beyond the Bounds set by that wise Author of Nature we cannot pass: it being wholly impossible for Creatures to contend with their Creator, or to extend the Time that he has limited.

Physicians are of all Men, without doubt, the most unhappy; People in their Extremities looking on 'em as their Saviors and Deliverers: yet after all, when they have don what was in the power of Man to do, having in all respects acquitted themselves with the utmost Fidelity and Diligence, if their Patients die, their appointed time being come, and the number of days allotted 'em by the Almighty being expir'd, the Friends of the Deceased seldom fail to blame 'em in one respect or other, tho' instead of that the Physician has deseru'd their utmost Favor and Esteem.

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By what I have said, I would not be understood to be so far a Predestinarian, as to believe Peoples Lives are not frequently prolong'd by the use of fit and proper Medicins: For if it were not so, why should the alwise Creator have bin at the trouble of providing such a vast number of Medicins in the Animal, Vegetable, and Mineral Kingdoms, if he did not design a real service to Mankind in distress?

God generally gives a Blessing to proper means, and does not work Miracles every day. He teaches the Plowman to plow his Ground, and the Seedsman to sow his Seed: but the one instead of a Plow must not use a Harrow; nor the other expect to reap Wheat, if he sows Barly. So it is in the Practice of Physic; he that expects success in it, must first endeavor to know the Causes of Diseases, then to use fit Remedies, and after that the Event must be left to the Almighty.

The Plowman may plow his Ground aright, and the Seedsman sow his Seed in due season, and after all they may reap no Crop: so the Physician may have an exact knowledg of the Causes of Diseases, and use the most fit and proper Medicins, and yet be frustrated in his Aim. Which ought to shew us what an exact reliance we should have on the Blessing of God in all our Endeavors, without which we are like to make but little progress in any thing.

I tread in an unbeaten Path, and therefore cannot so happily and easily arrive at my Journey's end, as if I had had som body or other to have chalk'd out my way.

I hope I shall not by these Indeaavors incur the displeasure of those Physicians who are of a contrary Judgment to me, they being still at liberty to use their own Methods, and Alkalious Medicins: For tho we act on different Principles, our Ends and Designs, I hope, are the same, which are the Cure of Diseases; and if, after a multitude of Experiments, I am convinc'd that Acids are not the Causes of Diseases, but that Alkalies are, and on that score induc'd to use Acids in all or most Distempers, I see no reason why I should be reproach'd for it, since I have made no personal Reflections upon any one.

As for the Physicians of our own Nation, I have the highest Value and Esteem for them, having generally found 'em to be Men of greater Learning, and to understand the Business of their Profession better than most of the Physicians I have met with abroad.

Som Farther

CONSIDERATIONS

Concerning

Alkaly and *Acid*, &c.

I Thought to have said no more on this Subject till the Publication of my History of *Human Blood*; but finding this to be of great difficulty, and that a larger number of Experiments than I at first thought will be necessary to make it complete in all its Parts, wherby it will be much longer than I at first intended before it appears in the World; I have therfore thought fit at present,

First, To explain the Terms, or what is meant by *Alkaly*, and what by *Acid*; of which I find very many, who are not Physicians, in a great measure ignorant.

Secondly, To explain the Nature of 'em more fully and clearly than I have yet don.

Thirdly, To answer the Objections raised against som particular things in my *Essay*.

All which Heads I shall handle with as much Brevity and Perspicuity as possible; omitting the fuller Prosecution of them to my History

of *Human Blood*, which shall com abroad as soon as possibly I can, but I doubt it will be som years first.

I shall make bold to declare, That I have not publish'd this Doctrin of *Alkaly* and *Acid* out of a design to appear singular, or be the Head of a Faction, but of mere Compassion to Mankind, my Fellow-Creatures, whose deplorable Circumstances under mistaken Methods I have long bewail'd, to see Phyfic made the Scene of Slaughter, and so many miserable Mortals (the helpless Sick) sent daily to their last Homes, as Victims to Error and Ignorance; while the learned Prescriber jogs on in his old mistaken *Alkalious* Road, not dreaming, as the Wise Man says, *that Death is there, and that his Portion* (I mean the Patient's) *is with the Worms.*

But to return to my Business.

First, I shall explain the Terms, or what is meant by *Alkaly*, and what by *Acid*.

Alkaly derives its Name from the Herb *Kaly*, from whose Ashes is extracted a large quantity of Salt, which by the *Venetians* and others is much us'd in making Soap and Glafs: this Salt they call *Sal Kaly*, and by leaving out the S, *Alkaly*. Now the Ashes of all or most Vegetables affording a Salt of the same nature with that of the Herb *Kaly*, therefore all *Lixivial* Salts are equivocally call'd *Alkalies*, as well as all other things of the same nature, whe-

whether manifestly *Saline* or not ; such as *Arsenic*, and all the *Testacea*, as *Pearl*, *Coral*, *Crabs Eyes*, *Oyster Shells*, &c. and all *Urinous* Spirits and Salts, such as Spirit and Salt of *Blood*, *Urin*, *Hartshorn*, &c. And som think, that of these Alkalies is made the famous *White Powder*, so much talk'd of, which kills without a Bounce, and murders without making a Noise.

Acid, I suppose, did first derive its name from *Acaid*, an *Arabian* word for *Acetum*, *Vinegar*, which is the most common and known Acid ; and therefore all things of the same taste and nature are Acids : such are the Juices of most Fruits and Plants in their natural state, and unfermented ; tho all fermented Vegetable Juices retain somthing of their pristin Acidity, tho not in so eminent a degree. But every body knows that fermented Juices, such as all sorts of *Wine*, *Ale*, *Beer*, &c. let 'em be preserv'd with never so much care, will at last return to their former state of Acidity. All *Metalline* Sulphurs are to be rang'd among Acids, being nothing but a Congestion of Acid Particles. I may likewise without presumption reckon all sorts of *Balsams*, and *Pinguedinous* and *Oleaginous* Substances, among the number of Acids ; because in the most bare and simple Distillation they afford large quantities of Acid Substances, but nothing Alkalious. *Bread* also, that is not without reason accounted the Staff of Life, affords by Distilla-

tion a large quantity of an Acid Substance, which is no despicable *Menstruum*. Sugar, which tho in its taste it seems to be nothing less than an Acid, yet by a Philosophical Management appears to be nothing else but a Congestion of Acid Particles.

Thus for the present I think I have given a sufficient account of what I mean by *Alkaly*, and what by *Acid*; and also what things are to be accounted *Alkalies*, and what *Acids*.

There are som things which seem to be of a mixt nature between *Alkaly* and *Acid*, which we call *Neutrals*. Now those of this Tribe, which afford a far greater quantity of Acid Substances than Alkalious ones, I stick not to call *Acids*, because the Acid predominates; and those that afford a far greater quantity of Alkalious than Acid Substances, I call *Alkalies*: Tho in a stricter sense they deserve rather to be called either *Sub-Acid Alkalies*, or *Sub-Alkaline Acids*, according as either the one or the other predominates.

I shall now procede to the second thing, which is, to explain the Nature of *Alkalies* and *Acids* more fully and clearly than I have yet don.

For the right performance of which, I shall compare the Operation of them upon Human Bodies, both internally and externally applied.

I shall begin with *Sal Kaly*, which is the Standard of Alkalies, and compare that with *Vinegar*, the Standard of Acids.

Sal Kaly, and so all Lixivious Vegetable Salts, as Salt of Wormwood, &c. being applied outwardly to the bare Skin, scorches and burns it, as if a red hot Iron was actually applied to it, causing an *Escar*, which falling off, an Ulcer follows: Nay, there is scarce any other Caustic used, than a *Lixivium* of *Sal Kaly*, which is what the Chirurgeons call Capital or Strong *Soap Lees*, evaporated to Driness. The same taken inwardly, without being greatly diluted by som Aqueous Vehicle, in most people causes enormous Vomitings, which I my self have formerly experienced; and tho never so much diluted, if it excites not Vomitings, yet rarely fails of depraving, palling, or totally destroying the Appetite: Besides, being conveyed into the Blood, by breaking its Globules, and spoiling its Texture, it causes either Scorbutus, Rheumatisms, Sciaticas, Consumptions, Gouts, Palsies, or som other of the fatal Tribe of Chronical Diseases.

Now I have shewn what *Sal Kaly*, and the rest of the Tribe of Vegetable Lixivious Salts will do; let us next see what effects even common plain Vinegar, which is the standard of Acids, will have, being externally and internally us'd.

It is well known that Vinegar externally applied, is of extraordinary use in many sorts
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of Inflammations, especially in an *Erisipela*, or St. *Anthony's* Fire. Clothes being dip'd in it, and applied to the Forehead and Temples, to the Wrists, the Stomach, and Bottoms of the Feet, I have experienced to be of singular use in som very burning Fevers: I have likewise (before I found out a more certain Remedy) us'd it with great success in violent Bleedings at the Nose, by dipping a Sponge in good strong Vinegar, and applying it to the *Scrotum*. I have also known it with good success us'd by poor people in stinking old Ulcers. From all which it appears, that being externally applied, 'tis no Caustic, and will make no Ulcer, but on the contrary, will cure Ulcers, ease Pain, &c. [Nay, in Scorbutic and Rheumatic Pains, there is scarce a better Medicin, especially if impregnated with Aromatics, and the parts well bath'd with the same Morning and Evening. This I have of late often us'd to the no small relief of People in great distress.]

Now we have seen som of its good Effects, being externally applied; let's see what it will do, internally taken.

First I shall mention an Account given of it by the Ingenious Dr. *Baynard*: He says he was call'd in to a Person who had a total Suppression of Urin, under which he had labor'd a considerable time, and that several things had in vain bin given him; he immediatly gave him a large Draught of Vinegar, which
soon

soon made him piss freely ; and by repeating it two or three times, he was perfectly freed of his Indisposition. The Doctor has given an account of this in one of the Philosophical Transactions; but I have not read it, nor have I time at present to look over those Papers. I think also he told me, that he did the same thing with it two or three times. He likewise gave me Instances of many Persons in most violent Fevers, who have bin presently cur'd by drinking large Draughts of *Atterpool* Water well acidulated.

I am also credibly inform'd, That Dr. *Bentley*, a late famous Physician in *Cheshire*, who lived to almost a hundred Years, had such wonderful Success in Fevers, that he got the Name of the Fever-Doctor, and that his Medicin was nothing but the Decoction of a certain Herb well acidulated with the Spirit of—a Noble Acid, which I am obliged not to reveal.

A worthy Lady, whose Name I must not mention, has assur'd me, that she has brought in the use of Vinegar, or Verjuice Posset-drink, in the Small-Pox, among her poor Neighbors in the Country where she lives; and where that has bin us'd from the beginning, she has scarce observ'd any one to die, or be disfigured; which agrees with what I observe in my *Essay*, p. 108. °

I have likewise often remark'd, that three or four Spoonfuls of it will immediatly check the
most

most violent Vomitings, occasion'd by the taking of some harsh *Antimonial* Medicins.

A great many other good qualities has simple Vinegar internally and externally applied (besides its being a good *Menstruum*) which I think not fit here to enumerat.

Som time since meeting with a Treatise of the Plague, written by one *Kemp* a Master of Arts (in all appearance a judicious honest Man) and finding in it a large Encomium of Vinegar, I could not forbear inserting it in this place. I shall not transcribe all he says of it, by reason it would take up too much room, but only what is most material.

' In the Works of several Physicians (says Mr. *Kemp*) ' there is often mention made of ' taking Vinegar, as it were by the by, in a ' small inconsiderable quantity, not for its own ' sake, but with other Medicins, as if it were ' only to help them down the better, and make ' them palatable: they will tell you that Vinegar is good with Cucumbers, and gives a ' pleasing relish to a Sallet; whereas in truth ' neither the one nor the other are good without the Vinegar; it is not only wholsom in it ' self, but also makes other things so, and ' takes away their Hurtfulness. When you ' speak of this singular Liquor, away with ' cold Commendations, which argue rather ' a willingness to dispraise, than a readiness to ' commend: If it did whet ones Wit as ' much as sharpen ones Stomach, there could ' nothing

'nothing dull or flat be spokē of it. It is
'Food and Physic, Meat and Medicin, Drink
'and Julep, Cordial and Antidote. Did you
'formerly taste it but as common Sauce? Do
'you now eat it as a common Remedy. When
'you are well, it is a Preservative from Sick-
'ness; when you are sick, it is a Restorative
'to Health. 'Tis like Apparel, which you
'put on, not only for Comeliness to hide Shame,
'but also for Warmth to keep out Cold. 'Tis
'like the Swords which the Gallants wear,
'not only for Ornament when they walk, but
'also for Defence, to fright a Thief when they
'travel, and slay an Enemy when they fight.
'Tis Relish for Sauce, 'tis Sauce for Meat,
'tis Medicin for Diseases, 'tis Cordial for the
'Heart; and not only a Cordial for the Spi-
'rits, but an Antidote against Poison; not
'only an Antidote against Poison, but against
'the Plague, the chief of Poisons: So Vine-
'gar is the chief of Antidotes, as the Sword is
'the King of Weapons.

'If you consider the Plague as arising from
'the Corruption of the Humors (as indeed it
'is the supreme and highest degree of Putre-
'faction) you may also take notice that no-
'thing resists it more. 'Tis Vinegar that
'keeps Fish, as Salmon, Oysters, and the
'like (which otherwise would soon cor-
'rupt) from Rottenness and Stinking: and
'if it would not do so much for Flesh,
'why has it bin so much used for em-
'balming

‘balming dead Corps? Nay it not only preserves, but recovers Flesh from Corruption. Roast stinking Meat, and baste it with Vinegar, and it shall neither offend your Nose nor Palat.

‘If you consider the Plague as a Poison, Vinegar is an Antidote against it. Hence ’tis that Physicians, to suppress and take away the fiery Venom of *Spurge, Laurel, Mezereon*, and other Plants, steep them in Vinegar, and so give them safely to their Patients; whereas otherwise they would kill, and be a worse Remedy than the Disease. Som have bin choakt by eating poison’d Mushrooms; but had they taken a Draught of Vinegar, they had bin out of danger. *Dioscorides* tells you it resists all Poisons hot and cold; and *Celsus* saith it is the most effectual Remedy against them; and tells of one poison’d by the Sting of an Asp, who being at a place where there was no Liquor, and not able to go to another where any might be had, by chance found a Flagon of Vinegar, which he drank off, and presently recover’d.

‘Has the Plague taken away your Stomach? Vinegar will stir it up, and get you an Appetit to your Meat. Is your Throat scorcht, your Tongue black and chopt, and your Mouth sore? Any ordinary Nurse will tell you the Virtue of Vinegar, to make a Gargarism, and wash it. Are you like to be choakt with Phlegm? Syrup of Vinegar is

'a common Medicin to cut it. Is your Brain
'loaden with Vapors, that you are like one in
'a Lethargy or dead Sleep? Let som Vinegar
'on a hot Iron be smoakt under your Nose,
'and it presently makes you awake. Are you
'pain'd in the Head, and troubled with tedi-
'ous Watching? Wet a Rose Cake or Cloth
'in Vinegar, and lay it to your Temples,
'and you may go to sleep, and take your
'rest.

At last he thus concludes. 'Tis for the Vir-
'tue of Vinegar that I wrote this Book. I
'would be loth to present you with a Glow-
'worm instead of a Diamond; or put a Bul-
'rush instead of a Spear into your Hand,
'when you are to fight with such an E-
'nemy. Imagin well, and think highly of
'this Medicin. I value my own Life as
'much as another dos his: I had rather
'take Vinegar alone than many other, nay
'than any other single Medicin without it.
'Despise it not, because easy to be had; nei-
'ther let it be contemned, because familiar.
'It is the more excellent, because common;
'the more precious, because cheap: the Vir-
'tues of it are so many, that they will hardly
'be believed; and therefore the greater, because
'incredible.

This plain Medicin cannot be sufficiently
recommended for the use of poor People, e-
specially in inflammatory Diseases, in most of
which it has scarce a fellow; for which cause I
have

have transcrib'd what this honest Man has said about it.

The next thing I shall do, will be to compare *Arsenic*, as the highest and most exalted Alkaly, with Oil of *Vitriol*, the most exalted Acid.

As for the external use of *Arsenic*, I know nothing of it experimentally; but it being of pernicious consequence internally taken, I suppose it can have no friendly operation externally applied.

Internally taken, it causes the most enormous Vomitings and Convulsions of the Stomach, cold Sweats, Palpitations of the Heart, Swoonings, most violent Thirst; and in general, seems to be a direct Enemy to Life, which in a short time it fails not to destroy. All which effects it will undoubtedly have, given in never so small a quantity. And all those who have bin so vain as to pretend to correct the poisonous, venomous Quality of *Arsenic*, so as to convert it into a good and safe Medicin, have attempted it only by the means of Acid Salts, such as *Sea-Salt*, *Nitre*, *Tartar*, *Vitriol*, &c. wherein I cannot tell whether any has yet bin so happy as to succede.

To prove *Arsenic* an Alkaly, and as such the Cause of those dreadful Symtoms that attend such as are so unhappy as to take it, I shall insert a Relation I had from Mr. *Payne* an Apothecary of *Brentford*, on Saturday, Feb. 16. 9th which is as follows.

A young Woman of *Brentford* having taken a very large quantity of *Arsenic* (as he told me, an Ounce) was immediatly attended with the most violent Symtoms imaginable; on which Dr. *Morris* was called in, who gave her large Quantities of *Sallet Oil*, the usual Remedy, without the least abating the Symtoms: Upon which he order'd them to procure a large quantity of Lemons, and to press the Juice out of them; of which he plentifully gave her, which soon took off those imminent and direful Symtoms that inevitably threatned Death; tho the Operation of the Acid might be somewhat impeded thro the quantity of Oil she had taken before.

But to return to my Business, which is to see what are the effects of Oil of *Vitriol*.

I confess the Acid Particles of this Oil are so concentrated, as to make it unfit to be externally or internally applied of it self; but being diluted in a proper Vehicle, is a Medicin second to none that I know of. A few Drops in Canary given to the youngest Children troubled with Worms, seldom or never fail of having the desir'd effect. It being mix'd with Hony of Roses, is one of the best Medicins perhaps known for the Scurvy in the Gums, breeding Flesh where it is wanting, and fastening the Teeth. Being mix'd with Spring-water and Brandy, of each equal parts, to a moderat Acidity, it is no despicable Medicin, giving ease in the most tormenting Pains of

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the Gout, the Part being fomented with it night and morning. I may be almost positive, that the Medicin us'd by the ingenious *Swiss* Gentlemen who now reside in this City, and are becom so deservedly famous, is nothing but a mixture of Oil of *Vitriol* with a certain Oleaginous Body in due proportion. This Medicin rarely fails giving immediat Ease in the most torturing Pains of the Gout. Which confirms what I have said in my Essay of the Gout, where I assert, that it is not from any Acidity in the Blood that the Gout is occasion'd, but from Particles of a quite contrary nature, *viz.* Alkalious ones; as evidently appears by analyzing the chalky Substance contain'd in the Nodes.

In my Tract of the Gout I have given an account of the Preparation of the foresaid Remedy, which is a very wonderful one, tho its Preparation be most easy.

A better general Medicin than Oil of *Vitriol* is scarce known in most continu'd Fevers; any small Liquors, as Barly water, small Beer, &c. being well impregnated with it, and drank freely.

I took som pains to transcribe what Mr. *Kemp* in his Treatise of the Pestilence has said concerning the Virtues of Vinegar: Oil of *Vitriol* being another of his Favorit Remedies in the cure of that worst of Distempers, I shall also trouble you with a little of what he says concerning it.

'Take

‘ Take som Spring-water, and put it into a
‘ fresh Glafs, and drop som Oil of *Vitriol* or
‘ *Sulphur* into it to make it sharp; then sweet-
‘ en it with Sugar, and drink it, both as a
‘ Preservative against a Fever or the Plague,
‘ and as a Medicin and Julep in time of Sick-
‘ nefs: and let me tell you, plain Spring-wa-
‘ ter, and Oil of *Vitriol* or Brimstone, is a
‘ better Julep in the Plague, pestilent, ma-
‘ lignant, and other burning Fevers, than al-
‘ most any other distil’d Water without it.

‘ Note, It is a vain and scrupulous Error to
‘ take, when you are dry and burning hot, but
‘ two or three Spoonfuls of Julep at a time. I
‘ never denied my Patients Drink in the Heat
‘ of a Fever, but let ’em drink Julep as much
‘ as they please; for a little Julepdos but little
‘ good, and rather increases the Heat: as the
‘ pouring a little Water upon a Smith’s Fire
‘ makes it flame the more, and burn the hot-
‘ ter; whereas a great deal dos quite extinguish
‘ and put it out.

‘ And because this Oil of *Vitriol* is so ex-
‘ cellent and useful a Remedy mixt with Wa-
‘ ter, in this and all hot Diseases I should ad-
‘ vise every ingenious Person that lives in the
‘ Country never to be without it.

‘ These Oils you must understand cannot b
‘ taken by themselves, but with Spring or
‘ stil’d Waters; and you must be caref
‘ spilling any Drop on your Clothes, for
‘ fret and make a hole in them. No

‘ refuse to meddle with them for fear of receiv-
 ‘ ing any hurt, you may as well do so by Fire,
 ‘ which you must not sit by, lest a Spark light
 ‘ on your Apron; neither must Men take To-
 ‘ bacco for fear of burning their Faces: And
 ‘ yet I must tell you, it is better to have a Spot
 ‘ on your Gown, or a Hole in your Clothes,
 ‘ which the negligent flabbering of it may oc-
 ‘ casion, than a Purple in your Skin, or a Botch
 ‘ or Carbuncle in your Flesh, which the dis-
 ‘ crete taking it will hinder.

‘ *Minderarus* in his Book of the Pestilence,
 ‘ where he treats of Oil of *Vitriol* and Brim-
 ‘ stone (which are much the same) saith,
 ‘ There is no Putrefaction whose Strength it
 ‘ dos not break, no Infection it dos not over-
 ‘ com, no depravation of Humors which it
 ‘ dos not rectify. In truth, might I speak free-
 ‘ ly, if I should be hindred or forbid the use of
 ‘ Oil of *Vitriol*, I would never com to the
 ‘ Cure of the Plague; or if I did, I should
 ‘ com disarm’d.

Mr. *Kemp* wrote his Book of the Plague for
 the benefit of the Poor, in the Year 1665,
 when that dreadful Distemper rag’d in this
 City.

The following Mixture is a noble Medicin
 that painful Distemper, the Stone in the
 reins.

of Oil of Bitter-Almonds one Ounce, Oil
 of *Vitriol* two Drams, Oil of Sassafras a
 Scruple;

Scruple ; mix them very well : then add Spirit of Wine rectified three Ounces ; digest two or three days in a gentle heat. The Dose is a small Sweetmeat Spoonful in Old Hock, or Infusion of Juniper Berries, once in four hours during the Paroxysm.

Given for a Month or six Weeks first in the Morning, and last at Night, in an Infusion of Lavender Flowers, it is an admirable Medicin in Epilepsies.

I could mention many cases more in which this Medicin is of singular use ; but in so doing I should too much swell this Appendix.

I shall next compare the *Testacea*, such as *Pearl, Coral, Crabs Eyes, &c.* with natural Balsams and Gums, such as *Balm of Gilead, Tolu, Peru, &c. Gum Ammoniacum, Galbanum, &c.*

As for *Pearl, Coral, and Crabs Eyes*, I know no use they are of at all externally applied ; and being internally taken, no body that I know pretends they are useful any further than to absorb the Acidity of the Stomach, where people labor under any Indisposition attended with an Acidity there. But they are so far from being useful in that case, that I scarce ever knew 'em so : And in any other case they have not the least shew of being useful, but frequently do a great deal of mischief, as I have observ'd in my Essay on the Small-Pox, &c.

Here let me mention a short Case related to me by Dr. Baynard, pertinent to this place.

A Merchant's Wife of some Eminence in *Bristol*, laboring under a decay'd Stomach, was reduc'd to such Weakness, as she was not able to go, and vomited all she took: Her Physicians supposing her Blood abounded with Acids, had loaded her weak Stomach with the whole Retinue of the Alkalious Kingdom, keeping their old Circle from the *Testacea* to the Volatil Alkalies, and from thence to the *Testacea* again; but at last she was perfectly cur'd with a few Doses of the *Gas Sulphuris* given in the *Bath Waters* cold, twice or thrice a day.

As for Balsams, should I pretend to describe their Excellences, it would be more fit for a large Volume, than to have any room in the Appendix to a small Essay. What a noble Medicin is Balm of *Gilead* in many cases? The Excellency of which is such, that God by the mouth of an inspired Writer, in way of allusion, when his people were in a calamitous Condition, cries out, *Is there no Balm in Gilead? Are there no Physicians there* (to apply it)? *Why then is not the Wound of the Daughter of my People healed?* What a noble Remedy is *Ammoniacum* in the most deplorable Astma's? the Spirit distil'd from which, with an equal quantity of *Verdigrease*, in a naked Fire, I believe to be as rare a Medicin as ever was us'd; nay, all the Gums and Balsams freed from their
Ramous

Ramous Viscous parts by Distillation, become much better Medicins than when in their natural state.

I shall say no more of Balsams, for fear of outrunning my bounds; but procede to answer the Objections rais'd against what I have said in som parts of my Essay.

Object. 1. You say that the Scurvy is occasion'd by too great a quantity of Alkalious Particles in the Blood, and is only cur'd by Acids. If so, how coms it that those who live on nothing almost but highly-salted Meat, are more troubled with the Scurvy than others, when you own Sea-Salt to be an Acid?

Ans. I own that Seamen, and such as dwell by the Sea-side in Marshy Grounds, who for the most part live on Salt Meat and Fish, are more troubled with the Scurvy than others. But this procedes not from their eating a larger quantity of Salt, but from eating more Flesh and Fish than others do, which abound with Alkalious Particles, and from the moistness of the Air about 'em, which hinders their free Perspiration. As for the Sea-Salt, which is in great quantities mix'd with their Food, that is all or most of it soon carried off by Urin, and with it som of the Alkaly too, which therby frames an *Armoniac* Salt, with which it is well known the Urin of such Persons abounds. Now what we call *Sal Armoniac*, is only a mixture of Volatil Alkaly and Sea-Salt. But

the Pores being shut by reason of the moisture of the Ambient Air, the Volatil Alkaly which should be discharg'd either by insensible Transpiration or Sweating, being pent in, causes all the Symtoms complain'd of by those Persons. To confirm which, it is well known that Seamen at Sea, or those who live in Marshy Grounds, can scarce be made to sweat by the most violent Labor. Now all who have bin so curious as to taste Sweat, know very well it has an Alkalious and not an Acid Taste: so that Sweating, or free Transpiration being hindred, the Blood must necessarily abound with too great a quantity of Alkalious Particles; all those that should have bin discharg'd by the cutaneous Glands being kept in it. And so I hope this Objection is answered.

Object. 2. In your Essay, p. 138. you allow that Acids in som Distempers do exorbitantly abound in the Stomach: Now how coms it, when there is so great a quantity of Acid in the Stomach, that the Blood and other Juices should be destitute of Acidity; there being no other way to convey any thing into the Blood or Juices, but thro the Stomach; and therefore with whatever the Stomach abounds, one would think it must necessarily be imparted to the Blood and other Juices?

Answ. I have before observ'd, *Nov. Lum. Chyr.* p. 14, 15. That there is no innat Ferment in the Stomach, but that the *Menstruum* us'd

to

to dissolve our Food, and turn it into a nutritious Juice, is the Liquor that by chewing our Meat is squeez'd out of the Glands of the Mouth and parts adjacent, which by numerous Experiments appears to be an Acid. Nay, all or most of the noble *Menstruums* I know, either in the Animal, Vegetable, or Mineral Kingdoms, are Acids. Now the Food being convey'd into the Stomach, and mix'd with the Volatil. Acid Liquor of the Glands of the Mouth, is by means of the same dissolv'd, and turn'd into a Substance fit for the Nutrition of our Bodies; a state of Health suppos'd.

It is well known, that few are troubled with an Acidity in their Stomachs, but those who use very little exercise, or whose Business disposes 'em to a Sedentary Life; and by this means the Chyle when made, for want of Motion and Exercise (the Fibers of the Stomach also having lost their Tone, and become lax) is not soon enough carried out of the Stomach; and lying there too long, the greatest part of it is turn'd into a Substance like the Ferment which at first dissolv'd it. All who know the nature of Ferments, will readily agree with me in this, That it is natural to 'em to endeavor the Change of those things they are mix'd with into their own nature.

Object. 3. But some will say, We can agree in what you have said hitherto; but how will
• you

you clear your self of your own seeming Objection, That this Acid Substance shall be kept from being convey'd into the Blood, and so being the only Cause of many Diseases?

Ans. I have always observed, That those who complain of an extraordinary Acidity in their Stomach, do

First, Make Water often, and in large quantities.

Secondly, They are very Lean. And

Thirdly, They are for the most part very Costive.

All which Symtoms I shall indeavor to prove are occasion'd for want of the Acid Substance in the Stomach being convey'd into the Blood.

As for the first Head, Why people who complain of an Acidity in their Stomachs, make more Water than those who are destitute of it; the Reason I judg to be as follows:

The solid Food they eat, instead of being converted into that viscid, white Liquor, we call Chyle only, by means of too great a quantity of Acid, is over attenuated, and converted into a thin limpid Substance, and that in a short time; which Substance, by means of the Liver pressing on the Stomach instead of passing into the small Guts thro the *Pylorus*, is squeez'd into certain Vessels that pass from the bottom of the Stomach to the Kidnys, and so is carried off by Urin,

To prove there are such Vessels as pass immediately from the bottom of the Stomach to the Kidneys, I shall transcribe a Passage of *Doleus's Encyclopedia Med.* pag. 359, 360. speaking of the parts affected in the Dropsy.

‘ I suppose (says he) that Liquid Substances
‘ may be convey’d from the Stomach thro the
‘ *Omentum* or Cawl, to the Kidneys; hence it
‘ is those Animals, who have no Cawl, make
‘ no Water, as may be seen in Birds and Fishes.
‘ To confirm which Opinion, I have dissected
‘ many Animals, always taking care before the
‘ Operation to gorge them with large quantities
‘ of clear Water; and afterwards have
‘ dissected them alive: I have found the Stomach
‘ as yet distended with the Water; but
‘ I pres’d the Vessels of the Cawl leading towards
‘ the Stomach, which being cover’d over with Fat
‘ like the Milky Veins, were, to my no little satisfaction,
‘ very turgid: And forasmuch as in a living Body the
‘ Pores of the Stomach and other Passages are
‘ always more open than in dead ones, where all
‘ things are flabby, and fall together, therefore the
‘ said *Transmeation* is not at all to be wonder’d at:
‘ And, which is worth taking notice of, in those
‘ Hydropical People I have open’d, I have always
‘ found the Cawl either putrid, torn, or full
‘ of Tumors. The following Experiment has
‘ also much confirm’d me in my Opinion, *viz.*
‘ That there are Vessels to convey liquid Substances
‘ from the Stomach, thro the Vessels of
‘ the

‘ the Cawl, to the Kidneys. Not long since an
‘ experienc’d *Herniotomist*, or Cutter of Rup-
‘ tures, of *Hanover*, whose Name was *Wed-*
‘ *ling*, by Section cur’d a certain Person of an
‘ *Omental* Rupture; and because a part of the
‘ Cawl was also cut away, the Patient who is
‘ yet alive, dos greatly complain of a difficulty
‘ in making Water; and if at any time he
‘ drinks any large quantity, he perceives a
‘ great Weight and Pain about his Stomach,
‘ and is always loose: hence, in my conjecture,
‘ som Vessels which carry the Urin right on
‘ to the Emulgents, were cut, by which
‘ means all he drank was carried into the *Duo-*
‘ *denum*, and so hinders the Fermentation there
‘ perform’d, and makes all the Fibers lax.
‘ From all which may be prov’d, that all we
‘ drink, and of consequence all other Substan-
‘ ces made very liquid in the Stomach, do not
‘ pass thro the Intestins to the Lacteal Veins,
‘ and thence thro the Thorachic Duct to the
‘ Heart, because the *Pylorus* is reflex to the
‘ Stomach, lest the liquid Substances con-
‘ tain’d in it should slide out. It is therefore cer-
‘ tain that liquid Substances lying at the bot-
‘ tom of the Stomach, pass thro it in that part
‘ join’d to the Cawl: and if these Vessels, or
‘ the Cawl it self, are either lacerated, broken,
‘ putrified, or obstructed with *Oedematous* Tu-
‘ mors, it necessarily follows that the liquid
‘ Substances in the Stomach must be let fall
‘ into the Cavity of the *Abdomen*, and so a
Drop-

'Dropſy is cauſed. But being free from any
'ſuch diſorder, liquid Subſtances muſt freely
'paſs thro them to the Kidnys, and ſo to the
'Bladder. I could cite other Authorities be-
ſides my own Obſervations, as Sir *George*
Ent, *Charlton Waldfmiedght*, &c. but this one
I think is ſufficient.

From this Doctrin may very great Conſo-
lation be afforded to People laboring under the
Stone in the Kidnys and Bladder; and indu-
ſtrious Phyſicians need not deſpair of finding
out ſuch Medicins as will diſſolve or break to
pieces Stones contained in either of thoſe parts.
One great reaſon I believe that has hindred
Perſons from making diligent ſearch after ſuch
Medicins, has bin a ſuppoſition that ſcarce
any Medicin could retain its Virtue, but muſt
be in great meaſure, or altogether deſtroy'd by
the many Alterations it muſt undergo, ac-
cording to the ordinary Laws of Circulation;
but were they fully ſatiſfied (as there is no
reaſon to the contrary) of this nearer Cut, I
ſuppoſe people would not think the diſſolving
Stones in the Kidnys and Bladder ſo difficult a
Task as it has hitherto bin thought to be.

• [I have known ſeveral that have long la-
bor'd under the Stone in the Kidnys, who
by taking ſuch a quantity of *Cremor Tartar*
and well acidulated *Tartarum Vitriolatum* every
Morning in a Diſh of Water-gruel for 3 or 4
Months together, as would juſt keep them
lax, and drinking fifteen or twenty Drops of dul-

dulcified Spirit of Salt two or three times a day in any convenient Vehicle, to have bin perfectly freed from all their troublesome Symtoms.]

To prove the Existence of the foresaid Passages for fluid Substances from the Stomach, thro the Vessels of the Cawl, to the Kidneys, and that Medicins may pass unalter'd to the Kidneys and Bladder, I shall insert two Cases.

One Mr. *Bradford*, an eminent Tradesman of *Worcester*, sent to me one Afternoon, desiring me to make all possible haste, for that he was on the Rack: When I came, I found him in a most dreadful condition, he not having made Water two days, and such an intolerable Pain in his Back, that he was not able to support himself under it. I presently gave him som Medicins, ordering him to take them in large quantities once in half an hour. In an hour and half at farthest, he sent to acquaint me that he was well, and at ease, having piss'd two large Chamberpots full, which held at least two Quarts apiece; and in the first Pot above two large Spoonfuls of small pieces of broken Stones. He has bin several times since, thro hard drinking, under the same Circumstances; and taking the same Medicins, has found immediat relief. Now had these Medicins bin convey'd from the Stomach to the small Guts, and thence by the Lacteal Vessels to the common Receptacle of the Chyle in the Mesentery, and so on to the Blood, and from thence bin separated by degrees in the Kidneys, as it

is brought there by the Emulgent Arteries, it had bin altogether impossible the Effect could have bin so sudden, and the Medicins not greatly alter'd, or totally destroy'd, by the many changes they must have undergon before they could com to the part affected. But by the way of which I have bin speaking, the Medicins might all of them, without being in the least impair'd in their Virtue, be transmitted to the Part affected, and so perform their Operations in breaking to pieces the Stone or Stones they met with either in the Kidnys or Bladder.

Mrs. *Wheatly*, a Glasier's Wife without *Smithfield-Bars*, had a long time bin afflicted with the Stone in the Bladder, and for about nine Months had confin'd her self to her Chamber: the Misery she underwent was such, that it made her altogether incapable of business; and she despair'd of ever being delivered, all common means having in vain bin us'd: at last she was prevail'd with to send for me. When I came, she gave a lamentable account of her Case; and tho I encourag'd her as much as possible, yet all I could say made but little impression upon her: however, she was at last prevail'd to try what I could do. I began to give her som Medicins, which she took in large quantities, and repeated 'em once in four hours: it was on a Monday morning she began to take them, and on the Wednesday night following I examin'd her Water, and
found

found som small ragged Pieces of Stone in it; and tasting the Water, I could discern the Medicins, which were Salino-sulphureous ones, to be as vigorous altogether, as they were before she had taken them, and not, as I could discern, in the least alter'd in their taste. On Thursday Morning by five a Clock, she sent her Maid-Servant to acquaint me that she was deliver'd from her Misery, and perfectly well. About eight a Clock I went to visit her, and found a Stone she had voided with little pain; the Medicins having acted upon the *Sphincter* Muscle of the Neck of the Bladder, and so relax'd it, as to make it give way for the Stone to pass: The length of the Stone was an Inch and half and half a quarter; it was three Inches and half round one way, and two Inches and a half another. There were som small Flaws in it, which were made by those little ragged pieces that came away the Night before, which I found in the Chamberpot. The thing was so extraordinary, that it came to the Ears of her late Majesty, who desir'd to see the Stone, which I procur'd for her; and she was pleas'd to say, *That it was the most extraordinary thing she had ever seen or heard of, to be brought away without Cutting or Instruments.* He who doubts the Truth of this Relation, may yet see the Stone at Mrs. *Wheatly's*, who carefully preserves it: The extraordinary Veracity and Integrity of the Person is such, that I am sure she would not tell an Untruth to do any Man service.

I could give other Instances of this nature ; but these two, I think, are sufficient, and a plain Demonstration that there are Vessels which carry fluid Substances immediatly from the Stomach to the Kidneys, without those many Circumgyrations that people generally imagin ; nay, I question not but suddenly to make it appear by ocular Demonstration : which if I could not do, yet to people who are not mere Sceptics, Demonstrations deduc'd from reiterated Experiments will be sufficient.

As a further confirmation of the Existence of these Urinary Passages, I shall presume to add a couple of Relations I had from Dr. *Tarborough* of *Newark* in *Nottinghamshire*.

' I was (says the Doctor) sent for to a
' Gentleman who liv'd at som distance from
' me, and for a considerable time had labor'd
' under an *Ascites*, his *Abdomen* being distend-
' ed prodigiously, and having all the Symtoms
' of a true *Ascites*. The first Night I came, I
' gave him a large Dose of *Tartarum Emetti-*
' *cum* (for by the way, common Doses of *E-*
' *mettics* won't work at all with Hydropical
' People) and sat by him to see it perform its
' Operation: after I had sat near two hours,
' and my Patience almost tir'd, he told me he
' was confident there was a mistake, and that
' I had given him a Cordial instead of a Vomit.
' To which I replied, I was sure of the contra-
' ry, that the Medicin was right and good in

‘ its kind. About half an hour after he called for
 ‘ a Chamberpot; but instead of vomiting, he
 ‘ pist a quart or two, and before the next Night
 ‘ had discharg’d all the Water contained in his
 ‘ *Abdomen*.

The second Relation was of a Maid who was under the same Circumstances with the foremention’d Gentleman; to whom, instead of *Tartarum Emetticum*, he gave a large Dose of Infusion of *Crocus Metallorum*, which had the same effect upon her as the *Tartarum Emetticum* had on the Gentleman.

These Relations were made before Dr. *Baynard* and several other Gentlemen, the truth of which he did affirm with all the Solemnness imaginable.

I confess an *Ascites* is one of the stubbornest and most difficult Distempers to be overcome of any I know: and I should be heartily glad, for the sake of those miserable People who are afflicted with it, that the foremention’d Method would always have the same success; which Dr. *Tarborough*, thro the whole course of his Practice, never saw it have, only in the two here mention’d. However it seems impossible that these Persons could have bin so suddenly reliev’d, were there not a more immediat Passage for the Water in their Abdomens, than by the ordinary ways of Circulation thro the Blood-vessels; and the reason of Dr. *Tarborough*’s relating these Cases, was to confirm me in my Opinion of those nearer Passages.

[In

[In the Months of *August*, *September*, and *October* of this present Year 98. I have bin concern'd with three Persons, who had the misfortune to labor under the foresaid dreadful Distemper; and considering that evacuation by Urin was the only one that could relieve them, and that the *Omentum* was a part greatly concerned in this matter, and also that by proper Fomentations it might not be impossible to remedy the Disorders of it, I prescribed such as then occurred to my mind, and by the repeated use of them, together with other proper internal Medicins, two of the three were made to piss plentifully, and are past danger; and of the third I am not in despair. After further trial, if the success continues to answer my expectation, the World shall certainly be fully inform'd of it.]

The Learned and Ingenious Dr. *Baynard's* Account of the sudden Effects of Vinegar before-mention'd, in a total suppression of Urin, is also a good Argument to evince the truth of what I have bin here speaking. But to proceed to my second Head, which is,

That those who abound with an Acidity in their Stomachs, are generally very lean.

To prove which Position, will be no difficult Task; for the solid Food they eat (and generally they have good Appetits) which affords most Nutrition, being over-attenuated, is thereby made capable of passing thro those Vessels I have before mention'd (which I shall

presume to call *Urinary Vessels*) the more gross parts only being convey'd to the small Guts ; which having but few nutritious Particles in them, can afford very little Nourishment to the parts, which being destitute of their usual and necessary Nourishment, Leanness of consequence must follow.

A sufficient Argument to prove that Leanness proceeds from the want of a sufficient quantity of Acid Substances in the Blood, is this : That Fat is nothing else but a Concrete, produc'd from the Mixture of the Acid and Oily Parts of the Blood. Now the Blood has never any Acid in it (at least not in abundance) but when People are in a perfect state of Health : and when the Blood is destitute of a sufficient quantity of Acid Particles, and abounds too much with Alkalious ones (which argues a morbid state) as it dos in those who have too great a quantity of Acid in their Stomachs, which upon experiment any man may find to be true, tho at first sight, I confess, it looks like a Paradox ; I say, when the Blood is destitute of a sufficient quantity of Acid Particles to coagulate the Oily ones, there can be no fresh production of Fat ; and that already generated having its Acid Particles mortified by the great quantity of Alkalious ones, presently loses its consistence, and is again converted into a thin Oil, which is soon carried off by some of the Emunctories, there being nothing in the Blood fit for it to incorporate or mix with:

with: and when these oily, fat Particles are gon, the corrosive, alkalious Particles prey upon the musculous, nervous Fibers, and cause general Disorders: at other times when in great quantities thrown upon particular Parts, according to the nature of the part affected, they cause different Diseases. But I know no Disease caused by Acids, unless it be over much Fatness, and what we call *Heartburn*, if they are to be accounted Diseases, the most healthy People being subject to the latter; tho the Heartburn is as often cur'd by Acids, such as *Ol. Vitriol. dul.* &c. as by Alkalies. From whence I conjecture, that the Heartburn also may be occasion'd from the Blood brought to the Coats of the Stomach, abounding with too great a quantity of Alkalious, Corrosive Particles, which may vellicat and contract the part. Having in short dispatch'd this Head, I shall procede to my third:

That those who abound with an Acidity in their Stomachs, are for the most part very Costive.

From the same reason that people abounding with an Acidity in their Stomachs are lean, it is that they are costive also; the more thin, fluid Substances being carried off by the Urinary Vessels, and only the more gross ones conveyed into the Guts: and for want of a sufficient quantity of Moisture, the Excrements are over-hardened. and the Guts not sufficiently lubricated; and therefore Costiveness must necessarily follow.

But after all, I foresee another Objection will be rais'd ; and therefore to make every body easy, I shall endeavor to answer it.

Object. If the Acidity in the Stomach causes the solid Food we eat to be over-attenuated, and so the nutritious Particles to be carried off by the Urinary Vessels, as in *Atrophies*, &c. without being convey'd into the Blood, to afford Nutrition to the parts ; how comes it to pass that Iron or Steel, which you own to be an Acid, can be of any use ? For instead of being useful, one would think by increasing the Acidity, it should exasperat and increase the Malady.

To which I answer : I have before observ'd, that Iron or Steel cannot be convey'd into the Blood before it is turn'd into a Vitriol ; and therefore to those who have a great Acidity in their Stomachs, it is found absolutely necessary to give it without any precedent Preparation ; which has bin long since observ'd by the Learned and Judicious Dr. *Cole*, in his Physico-Medical Essay concerning the late Frequency of Apoplexies. Now Iron or Steel given crude and unprepar'd, is by the Acid in the Stomach turn'd into a Vitriol ; wherby the Acid is so embodied, as to make it incapable of passing thro the almost imperceptible Urinary Passages, and likewise to hinder it from over-much attenuating the Chyle ; so that being mix'd with the Chyle, they are together convey'd into the small Guts, and so on to the

*

Blood :

Blood : and by its Stiptic Acidity it confirms the Texture of the Blood, and mortifies the luxuriant Alkalious Particles it meets with. [And for the relief of those who over-much abound with an Acid Juice in their Stomachs, I believe there is scarce any thing can outdo the Iron Bullets before taken notice of in this Edition of the Essay.]

As for what I have mention'd concerning the Efficacy of Juice of Lemons, in immediately abating and taking off the violent Symptoms that attended a Person who had bin bit with a Viper, after the Volatil Salt of Vipers, and other Antidotes had in vain bin given ; I find the very same thing taken notice of by *Hoffman* in his *Clavis Pharmaceutica Schroderiana*, pag. 444, 445. [But for a further illustration of that matter, I refer you to my account of the Cure of the person bit by a Viper.]

An ingenious Person not long since, who had formerly imbrac'd the Doctrin of Acids, was willing to try what Effects the Transfusion of Acid and Alkalious Liquors into the Veins of Dogs would produce: accordingly he injected som Oil of *Sulphur per Campan.* into the Veins of one Dog ; which instead of disordering him, made him brisk and lively, and very hungry : But in another Dog, into whose Veins som Oil of *Tartar per Deliquium* (a known Alkaly) had bin injected, it produc'd a clear contrary effect, the Dog being lumpish and dull, and dying in a few days. But it is

to be observ'd, that these two Liquors were so diluted, as to make 'em fit to be taken at the Mouth, before they were injected. Something (as I remember) of this nature is taken notice of by *Fred. Hoffman, Fil. de Acido & Viscido.*

I have bin assur'd by a Person of the greatest Honor, that the *Jews* in *Constantinople* (who are the only Physicians there) advise their Patients, when the Plague rages, to eat Lemon and Sugar, and to drink Lemonade in large quantities, and that by way of prevention; and those who do so, seldom or never have the Plague: And when they are call'd to Persons who have it, if they take but the foresaid Medicins in large quantities, they very rarely miscarry.

From many late Observations I am fully convinc'd, that the Gout is without any great difficulty to be cur'd, or at least a Fit to be taken off in a small time, by a proper Course of Acid Medicins, both internally taken, and externally applied to the Part affected, and that without the least Inconvenience afterwards: And I am certain, the only reason why people have hitherto so frustraneously attempted the Cure of that Distemper, is the general Prejudice they have had against Acid Medicins, which are only capable of doing service.

Tho I contend so mightily for the use of Acids in general in the Cure of Diseases, yet I pretend not in the least that any one Acid is

capable of answering a Physician's Intention in all Diseases: Neither Vinegar nor Lemons are to be reckon'd *Panaceas*; tho, for ought I know, in the hands of one who well understands their use, they will either of 'em do more than many of the celebrated *Panaceas*.

No man is fit to be call'd a Physician, who dos not well understand the Nature of Diseases, and of the Juices contained in a Human Body, which has hitherto bin but little inquir'd into; Men taking up with general Notions that had no Foundation, which has caus'd Physic to be so long practis'd without the least certainty; Physicians changing the Method of their Practice almost as often as we do our Clothes. Being well skil'd in the Anatomy of the solid Parts, is a noble Qualification, and inables a Man to talk finely; but dos not in the least tend to inable men to cure Diseases. It is an exact Skill in the Anatomy of the Juices, the fluid Parts, that will make a Man a good Physician; but in this sort of Study few have bin conversant. An exact knowlege of the *Materia Medica* in general, and the specific Differences between those Medicins, seemingly of the same Tribe, is also absolutely necessary: For that Acid that will cure a Fever, may not cure the Gout; and that which will cure the Gout, may not perhaps cure another Chronical Distemper; there being a vast difference between those very Medicins which are seemingly the same.

I do positively affirm, That neither Blood, nor its *Serum*, by being any way that I know of expos'd to Putrefaction, will in the least becom Acid, but rather more Alkalious. Now Acids in general hindring Putrefaction, and reducing putrid things to a state of Soundness, must be the great Medicins to cure Diseases; for there is no Disease but proceeds from som sort of Putrefaction of the fluid Parts of our Bodies.

What I have said in my *Essay*, and also in this *Appendix*, has bin only in general terms; but I am now reducing all to a Method, designing my *History of Blood* to be also a Methodical History of Diseases, with an account of the proper Medicins for their Cure; and being resolv'd to serve my Generation to the utmost of my power, let my treatment be what it will.

[As I before said, so I repeat it again, that upon many Reviews and serious Consideration, I have thought fit at present to lay aside my *History of Blood*; for to make it perfectly complete, requires so much charge, that it is more fit to be don at the expence of the Public, than by any privat Person: however, I hope to have it finish'd by one means or other before I dy.]

I shall conclude this Appendix with two or three Cases, and the Method I used in the Cure of 'em, to confirm the Truth of som things in my *Essay*.

Case

Case the First.

A Gentleman had labor'd under a *Sciatica* for two or three Years, and applied himself to Physicians of the greatest Eminence for Advice, and by their Prescriptions bin loaded all that time with Alkalious Medicins, without receiving the least advantage; having his left Leg and Thigh greatly emaciated, and a very large Glandulous Tumor on his Hip: He was never free from violent Pain, and being very lame. I first purg'd him well for a Fortnight with *Calamel. Tart. Vitriolat.* and *Rezin of Jal-lap*: I afterwards gave him the following Medicins, which he took constantly three times a day for about ten Weeks; in which time, without any external Applicatiop at all, his Pain left him, the Tumor disappear'd, and his Leg and Thigh, which were before wasted to mere Skin and Bones, became equally plump and fleshy with the other. [And to this day he continues well, it being at least five years since the Cure was wrought, and has never had the least return of his Distemper.]

℞ *Cinnabaris Antimonii, vel (quod melior est) Factitia Com. Officinarum recenter levigat. unciam unam; Gum. Guaiaci dracmas sex; Conf. Cynosbati uncias tres; Syr. Sambuci q. s. f. Electuarium. Dosis est quant. Nucismoscata ter in die,*

*die, horis medicinalibus, superbibendo
uncias octo Infusionis sequentis.*

*R. Rad. Bardanae siccatae & grosse contusae
uncias octo; Baccar. Juniperi, uncias
quatuor sem. Bardanae, Fraxini, ana
unc. unam semis; Sassafras unciam u-
nam; Tartari Vitriolati dracmas tres;
Aq. Font. ℥ sex. Infunde clausa &
calide per horas xii. & coletur, colatura
sing. libris duabus. Adde Sp. Liq. Guaiaci
Rect. unciam semis. M.*

This Method I have so often experienced in this Case, that I dare recommend it to be generally depended upon.

• *Case the Second.*

A pretty young Gentleman, who had bin too free with the fair Sex by his over frequent Embraces, was poxt to the highest degree, being leprous from the Crown of his Head to the Soles of his Feet, and had all other Symtoms of the most confirm'd Pox I ever met with. He was altogether averse to Salivation; I therefore gave him the foresaid Medicins, which he took three times a day for about two Months: but I first purg'd him well with *Calamel. Tart. Vit.* and *Rezin Fallap.* and for the last Fortnight sent him to the *Bagnio* three times a week, ordering him to take a large
Dose

Dose of the Electuary and Infusion about an hour before he went in. At two months end he was perfectly freed from his Leprosy, and his Skin as clean and white as ever I saw any one's in my life, and all other Symtoms that attended him were perfectly vanish'd.

Case the Third.

A Corporal in the Right Hon. the Earl of Oxford's Regiment, was pox'd to the highest degree; on which he applied to a Physician near *Chelisy*, who put him into the poudering Tub of Affliction three times; and tho each time he underwent a regular Salivation, his Symtoms were not in the least abated. He was so emaciated, that he was like a mere Skeleton. He had violent Pain in his Head, Shoulders, Arms, Thighs, and Shinbones; and when he was warm in Bed, the Pain was so exasperated, that tho he was scarce able to stand, yet out of his Bed he was forc'd to get, and crawl about in the cold, which afforded him som small Relief. His Appetit was quite lost, and he had a continual Hectic upon him. To be short, I think I never saw so miserable a Spectacle in my life. I gave him the Electuary and Infusion thrice a day, which soon abated the violence of the Symtoms; and continuing to use them about three months, tho he had seldom less than four or five Stools a day, he gather'd Flesh, and in that time became

came a hale hearty Man, to the surprize of all who knew him. I may be positive it was not above six Weeks before he was able to walk about his business.

I have given these Medicins I believe to two hundred People in several Chronical Distempers, with extraordinary success: And tho in the day-time they seldom fail of working three or four times by Stool, and in the night provoking Sweat; yet I have scarce known any who have taken them, that during the time of their taking, for all the great Evacuations they cause, have not sensibly gather'd Flesh, and if weak, recover'd Strength. Whereas let the strongest persons take any of the common Purgers but a month together; and tho they have not above two or three Stools a day, yet they will emaciat and weaken them to a great degree: which is a great Argument of the excellency of *Cinnaberin* Medicins mixt with *Gum Guaiaci* above the common Purgers; the one carrying off the nutritious as well as the excrementitious Juices, the other only causing a due secretion of the noxious excrementitious Juices: by which Nature is rid of any Load wherewith she is oppress'd, and inabled to apply the nutritious Juices to the ends for which they are design'd.

I have in extraordinary Cases given above a pound of *Cinnaber* at times to one person, and never knew the least ill Symptom follow, nor ever once to excite Salivation: and I verily believe,

lieve, in the hands of one who knows how to use it, it is one of the greatest Medicins in Chronical Diseases in the World; but being us'd with *Gum Guaiaci*, and *Spiritus Guaiaci rect.* it dos much better than alone, they greatly assisting in its Operation. Being mix'd with proper Cephalics, and taken for som time, it is a wonderful Medicin in Epilepsies, and other nervous Distempers. *Hoffman* has wrote a whole Treatise of *Cinnaber*; and I could say ten times more in its praise from my own Experience, than *Hoffman* has don.

Children are frequently troubled with Convulsions, more of 'em dying of that than of all other Distempers. Testaceous Pouders are generally given, as the great *Asylum* to which Physicians fly, but rarely with Success. But giving 'em temperat Acids mix'd with proper Cephalics, I have generally found 'em to answer my Intentions.

I was not long since sent for to a Child who had Convulsions to such a degree, that his Parents believ'd it to be an Epilepsy. His Belly was hard like a Stone, and he had continual Tortions and convulsive Contractions, sometimes of his Hands and Arms; sometimes his Legs and Thighs would be distorted, and almost out of Joint; sometimes he had the most violent Vomitings, and at other times the Muscles of his Face would be strangely contracted. I gave him the following Medicins, and in about two days he was free from his
Con-

Convulsions, and in a fortnight's time perfectly well.

℞ *Tart. Vitriolati* dracm. unam; *Crem. Tart. dracmas* duas; *Castorei* dracm. semis; *Sacchari albi unciam* semis. *M. f. Pul. in viii Chart. distribuend. ex quibus cap. n^o 1. quartâ quâque horâ in Cochlear. Julap. seq. superbibendo Cochlear. tria vel quatuor ejusd.*

℞ *Aq. Rorismarini, Pulegii, ana uncias* tres; *Peon. Comp. uncias* duas; *Ol Vitrioli Dul. scrupl. unum*; *Syr. Peonia dracmas* tres. *M. f. Julap.*

℞ *Ol. Amygdalar. Amar. unciam* unam; *Ung. Dialthea uncias* duas; *Ol. Anisi, Pulegii, ana gut. vi. M. f. Linimentum, cum quo illinatur Regio Umbilicalis manè & vesperi, superponendo Pannum laneum ter duplicatum.*

By this Method, with som variation, according as different Symtoms appear, I have known multitudes of Children, whose Lives have bin despair'd of, cur'd of the most violent Convulsions in a small time.

I have likewise observ'd, that in malignant Fevers, those who are treated according to the usual custom, with Alkalies and *Alexipharmics*, are generally attended with violent Convulsions :

violent Convulsions: But those who use Acids plentifully, are seldom or never convulsive.

I have cured many of that troublesome Cough that has rag'd this *March*, by only giving large quantities of Lemon and Sugar, to be eaten day and night; and an Opiat with some Drops of Oil of Sulphur *per Campan.* at night going to Bed.

In violent Hysterical Fits in Women, I have frequently (seldom failing of success) given a mixture of two or three Spoonfuls of Vinegar, a few Grains of *Castor*, and about a quarter of a pint of Spring Water: Which has frequently abated and taken off the Fits, tho before greatly exasperated by Spirit of Harts-horn, *Sal Armoniac*, &c. *Gas Sulphuris* also given alone is a wonderful Medicin in violent Hysterical Fits. And in the beginning of Consumptions, I believe there is not a better Medicin than *Gas Sulphuris* given in large quantities. But the *Cortex*, which is now so universally us'd in Consumptions without the least shew of Reason, I believe to be the most pernicious Medicin in Hectical Distempers that ever was given. I have inquir'd of several Physicians and Apothecaries; whether they ever yet saw a Hectic cur'd by the *Cortex*, who have unanimously declared they never did; and that almost all that have taken it have died. I must declare I never saw any one cur'd of a Consumption, but by Acids, such as *Gas Sulphuris*, *Ol. Sulphuris per Campan.* &c. by which I

my self have cur'd many. But sometimes in extraordinary Cases, especially if the Distemper has bin of long standing, and the Texture of the Lungs much spoil'd, Acids themselves will leave us in the lurch, even after the Symptoms have seem'd to be much abated, and things have look'd with a promising Aspect: Which I have experienc'd in one or two Patients, whose Lives have bin very dear to me; which I cannot mention without the greatest Concern. Notwithstanding I dare not even in Consumptions leave off the use of Acids, because I am sure they will do more than any thing else; and there are no Medicins whatever that will make people immortal. I have cur'd many with Acids, but never could hear of one cur'd without them.

By the use of proper Acids I have rarely fail'd of curing the following Distempers, som of which are accounted among the most difficult ones; and it ever I can find time, I will give a distinct account of the cure of them.

(1.) *Hard Bellies* in Children, with an Atrophy attending 'em, which is very common, and seldom cur'd by other Methods.

(2.) *The Stone*, to take it off (if of a passable Bigness) with Ease, Speed, and Safety.

(3.) *Childbed Fevers*, of which Dr. Willis says, they are most difficult to be cur'd of any.

(4.) *Catarrh*, or Defluxion.

(5.) *Cholera Morbus*.

(6.) *Diarrhea* and *Dysentery*.

(7.) *Jaundice*, &c.

The

The wonderful Success Dr. *Baynard* (with whose intimat Conversation I have of late bin honor'd) has had thro the Course of his Practice, is eminently known both in *London*, *Bath*, and *Lancashire*, where he formerly dwelt: And his Practice has chiefly run upon Acids; which (as he has all the reason in the world) he dos strenuously vindicate and defend.

It was out of a Life-saving Principle that this Gentleman imbrac'd the Doctrin of Acids in opposition to the Multitude; who for want of this Knowledg daily record their sad Cures in Sextons Books, and the Weekly Bills: And I dare say, he has wrought more substantial good Cures, than any one besides him, who has acted on different Principles.

I don't find that the Method of making the *Gas Sulphuris*, which is a Medicin I have often mention'd, is any where set down; I shall therefore give an account of its Preparation, which, tho a very easy one, is for all that a noble Medicin.

Gas Sulphuris.

Put into a large Glafs Receiver, that will hold six or eight Gallons, about four Quarts of pure Spring-water; then burn in the Receiver a quarter of a pound of pure *Sulphur vivum* made into very long Matches: and when they are lighted, the Flame must be as near the middle of the Body of the Receiver as may be. When you have burnt three or four Matches,

the Receiver will be so full of the Steams of Brimstone, that when the lighted Match is put in, it will be immediatly extinguish'd: you must then stop the Mouth of the Receiver very close with a wet Cloth, and let the Steams condense: when you see the Receiver clear, burn more Matches till it is again fill'd up with Steams; then stop it again, and repeat this work till your Matches are all burnt, when your Water will be impregnated with the Volatil Acid Steams of Brimstone.

This Medicin given liberally in malignant Fevers has don Wonders, even where people have bin given over as dead. It is an excellent Medicin taken by way of Prevention in infectious Seasons. And I think this Medicin, if any, deserves to be call'd the true *Prophylacticon*.

Dr. Baynard has another way of making the *Gas Sulphuris* somewhat more warm and Alexipharmic.

Take a large Glafs Receiver, with a Mouth of three or four Inches Diameter: place it Horizontally, into which pour *Aq. Petasitid. Ulmarie simp. Vini Rhenani, ana ℥ duas; Aq. Rutæ, succi Pomorum silvest. vet. ana ℥ unam; Aq. Theriacalis, Prophylact. Sylvii, ana uncias quatuor: M.* Then take an Iron Ladle fitted to the Mouth of the Glafs, with a long Handle; put into the Ladle half an Ounce of *Sulphur vivum* powder'd, accend with a small Gad of red hot Steel; when lighted, clap it into the Receiver so far, that the Fumes may arise in the

the middle of the Glass; and the bigger the Glass the better: for the more Fumes it contains, the sooner will your Operation be over. Stop the Mouth with a wet Cloth, that the Streams get not out; when the Fumes have extinguish'd the Flame, let it stand, that the *Oleum Sulphuris* may trickle down the sides of the Glass, and subside upon the *Menstruum*; when the Fumes are settled, and the Glass clear, quickly draw out your Ladle, and repeat the Action till it be well impregnated with strong Volatil Gas. Remember always to keep the mouth of the Glass well stoppt with the wet Cloth; otherwise the Gas, which is of a most subtil nature, will evaporat.

A Spoonful of this given once in two or three hours in a proper Julap, dos most wonderfully extinguish Thirst in Fevers, procures Sweat or Urin infallibly, takes off the driness of the Tongue, temperats and cools the over-heated Bile, and procures Rest. Also mix'd with a little Claret, and a Drop or two of Oil of Cinnamon, stops Vomiting to a miracle; and is the best *Peptic* for a weak and decay'd Stomach.

Note, That when the Gas is quite gon, and flown off, the mixture will notwithstanding remain four, as impregnated with the *Oleum Sulphuris*; but the Gas, which is the better part, will in time be lost (it is so subtil) even almost thro the Pores of the Glass. You must dip the Cork-end of the Bottle in melted Brimstone, and keep it always immerg'd in cold Water.

Water. But the best way to keep it is in small Glasses, and to open no more at a time than you use, it losing its volatil Parts very much every time the Bottle is open'd.

As a further illustration of the Doctrin of Acids, I shall add an Account I receiv'd from Dr. *Oliver*, one of the Physicians of the Fleet, about the use of *Beveridg*.

' *Beveridg* is a prickt, four *Spanish* Wine; one
' Hogthead of it mix'd with three Hogtheads
' of Water, makes the Drink the Sailers are
' allowed to drink *ad libitum*.

' By my Experience in the Fleet, those Ships
' Crews who drank this Acid Liquor for their
' common Drink, were much healthier than
' those who by their obstinacy would not be
' brought to it; as for Example:

' The *Royal Oak* a third Rate, carrying a-
' bout 500 men, whose Ship's Crew, by Ad-
' miral *Nevil's* particular Order, began first to
' drink *Beveridg* (he having had experience of
' it two years in the *Mediterranean* in the *Crown*,
' in all which time he lost not above two men)
' and in three months time I don't remember I
' had three Complaints; tho at the same time,
' in other Ships where they drank no *Beveridg*,
' Fevers and Fluxes were very frequent. Here
' I shall insert one thing worthy of note, That
' the *Royal Oak* wanting *Beveridg*, and being
' oblig'd to drink Water only, in a few days they
' grew very sickly, and lost above 30 men in a
' month; insomuch that the men themselves
' were

‘ were so sensible of their own advantage by
‘ drinking Beveridge, that they heartily desir’d
‘ they might drink nothing else, and beg’d it
‘ wherever they could find it. The like experience I had of the *Eagle, Norfolk*, and several other of our Ships, who were always better in health when they drank Beveridge, than when they drank Water alone, or sound Wine and Water. From these Experiences I advis’d the Captains of each Ship to procure Beveridge as common Drink for the Men, and the Success answer’d my Expectation.

This is an exact Relation as I took it from Dr. *Oliver*’s own mouth.

I have more to say, but have already outrun the Bounds of an Appendix; and therefore shall omit what remains till another time.

Advertisement.

WHat Chymical Medicines I prescribe, are faithfully prepar’d by Mr. *Johnson* and *Edwards* in *Fetterlane*, who being men of more than common Integrity, I have thought fit to insert this Advertisement, that people may know where to be well serv’d with Medicines that may answer the Intentions for which I design’d ’em.

John Colbatch.

F I N I S.



